Japan Display Inc.

JDI IMDS Datasheet Creation Manual

Japan Display Inc.

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Table of contents

1 Introduction **4**
1-1 Objectives
1-2 Scope

2 Basic concept on IMDS Reports **6**
2-1 How to research and report
2-2 On confidential information
2-3 Reactive materials in delivered items

3 How to input to IMDS (fundamental) **9**
3-1 IMDS Recommendation
3-2 IMDS User's Manual and IMDS Training Guide

4 How to input and notes (with specific notes from JDI only included) **12**
4-1 List of JDI Specific Requirements
4-2 Basic items
4-3 IMDS Committee-Approved Materials
4-4 Names of materials and goods
4-5 "Prior Declarations" for the preparation step of mass production
4-6 Application Code
4-7 Filler Code
4-8 Recyclate Information
4-9 Parts Number Subject To Submission

Table of contents

4-10 When parts supplied by JDI are included
4-11 On submission of MDS Reports
4-12 How to transfer data

5 Warning in IMDS **39**
5-1 Confirming errors and warnings
5-2 Corrective actions

6 Points for preparing Substance Research Data **49**
6-1 Always report substances listed on GADSL
6-2 Report substances as in final products
6-3 Report in line with the latest design change and material change
6-4 Pass Substance Research Data across the supply chain
6-5 Report every homogeneous material separately
6-6 Report indications with or without Material Properties Indication
6-7 Report Parts Masses correctly
6-8 How to input glass components
6-9 Input a material name in the name field of the Material Data
6-10 Report as material or semi-component for MDS Type, as for components whose delivered unit and JDI usage unit are different

7 Contacts **67**

Revision history **69**

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JDI

1 Introduction

1-1 Objectives
1-2 Scope

1-1 Objectives

This manual describes how to create and report Substance Research Data using IMDS*1.

Refer to IMDS Recommendation, IMDS User's Manual*2, and IMDS Training Guide in regard to how to input IMDS data basically.

Refer to this manual for requirements specified by JDI only.

*1 IMDS(International Material Data System):

The system particularly developed by the Verband der Automobilindustrie (VDA). The system is a database system of global automobile industry standards. The system is also operated by predominant global automobile manufacturers memberships.

*2 IMDS User's Manual: User's Manual for the Material Data System (IMDS).

Use this manual for improving the quality of MDS data.

1-2 Scope

This manual is applied to IMDS data sent by suppliers.

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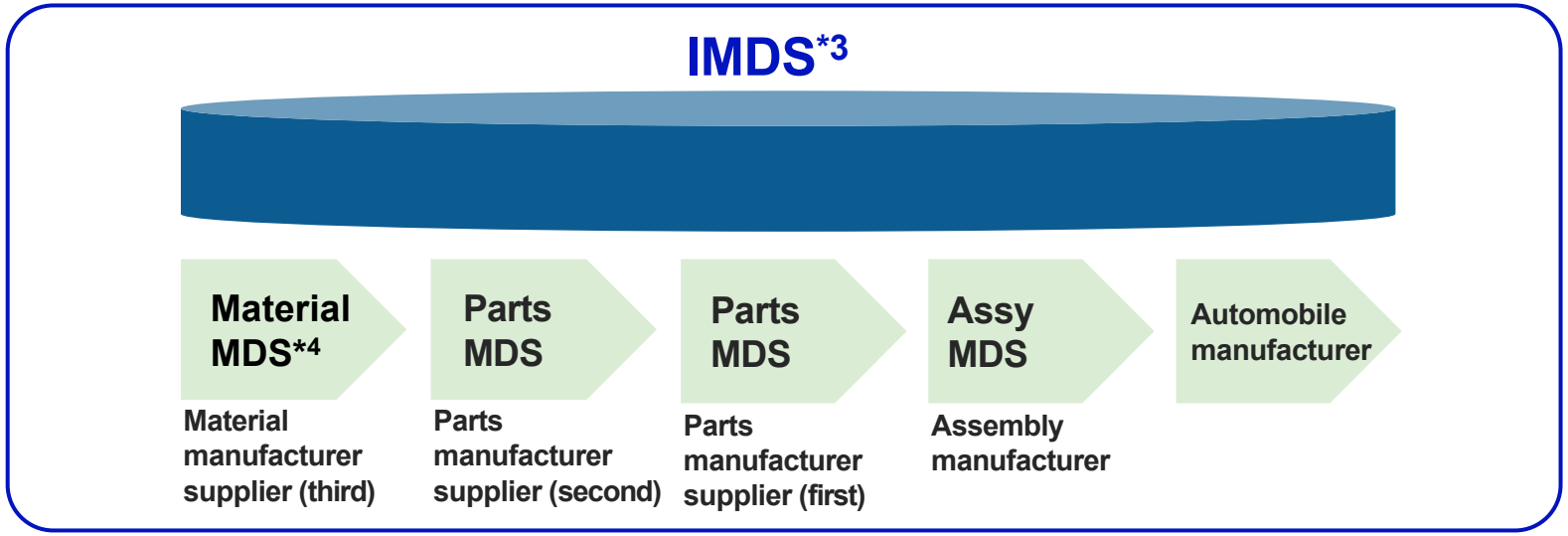
2 Basic concept on IMDS Reports

2-1 How to research and report
2-2 On confidential information
2-3 Reactive materials in delivered items

2-1 How to research and report

Please be advised that suppliers report us parts and materials after exploring included substances (components) through going back across your supply chains.



*3 **IMDS** (International Material Data System):

This system is the database on the web for which automobile businesses collect MDSs to cope with environmental laws and regulations. The system is also broadly used through supply chains aiming to submit their MDS for the final goal to automobile manufacturers as communication means of MDS.

*4 **MDS** (Material Data Sheet):

Data regarding materials that constitute products and parts, and compounds that constitute the materials.

2-2 On confidential information

For non-disclosure substances (components), the maximum content is up to 10% per homogeneous material. In this regard, avoid including substances regulated by GADSL in the non-disclosure substances.

* For GADSL, refer to "6-1 Always report substances listed on GADSL."

2-3 Reactive materials in delivered items

Report as materials are on delivery to us.

Report a substance that is finally included in (adhered to) the product after reaction such as resins, adhesives, coatings, solder, and plating.

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3 How to input to IMDS (fundamental)

3-1 IMDS Recommendation
3-2 IMDS User's Manual and IMDS Training Guide

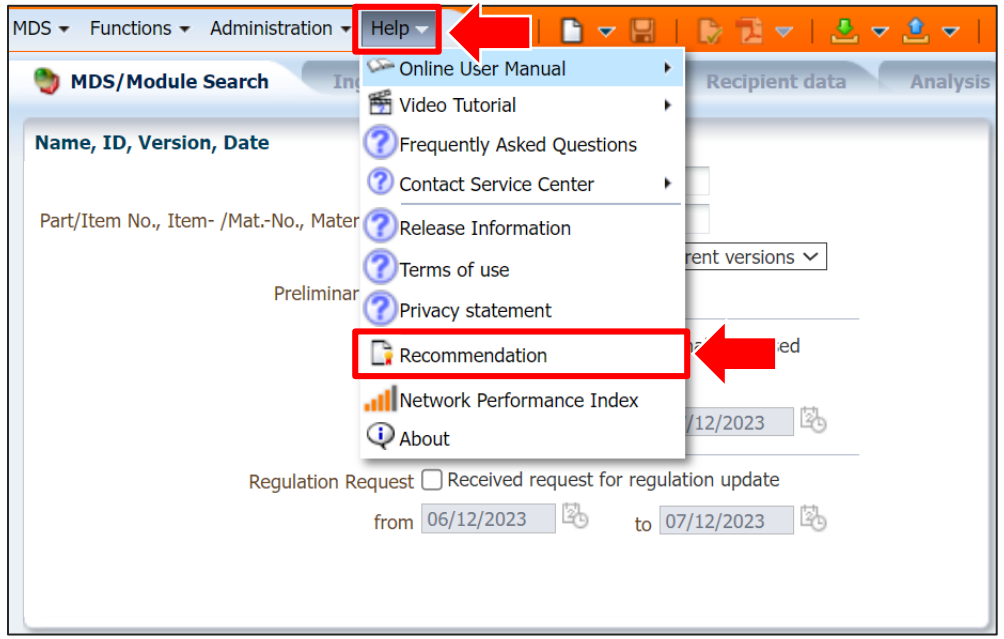
3-1 IMDS Recommendation

The IMDS Recommendations are used for the input rule for the IMDS. The recommendations indicate what the IMDS steering committee recommends.

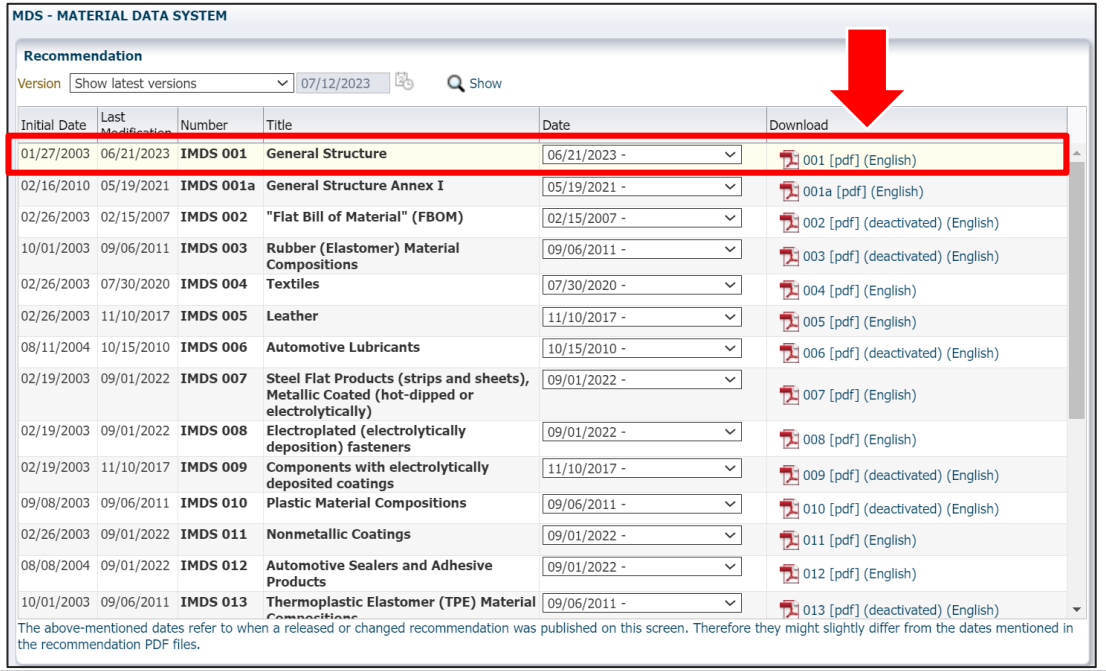
IMDS Loginhttps://www.mdsystem.com/imdsnt/faces/login

After login to IMDS, download the file as follows and confirm it.

(1) After the login to IMDS, click [Help]→[Recommendation] on the menu bar.



(2) Click to download.
(Example) IMDS 001

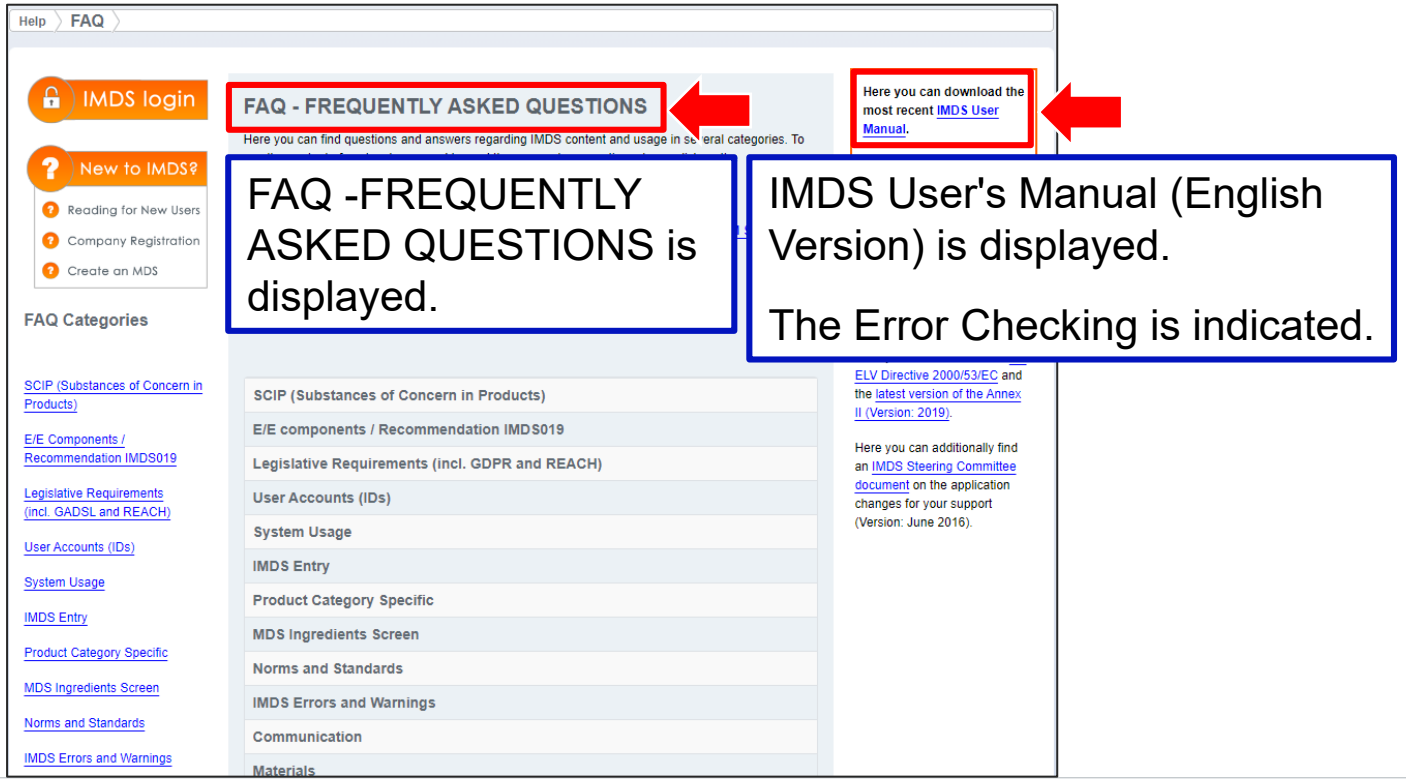


3-2 IMDS User's Manual and IMDS Training Guide

Download the IMDS User's Manual and IMDS Training Guide from the URL below.
Japanese https://public.mdsystem.com/ja/web/imds-public-pages/faq

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

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



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4 How to input and notes (with specific notes from JDI only included)

4-1 List of JDI Specific Requirements
4-2 Basic items
4-3 IMDS Committee-Approved Materials
4-4 Names of materials and goods
4-5 "Prior Declarations" for the preparation step of mass production
4-6 Application Code
4-7 Filler Code
4-8 Recyclate Information
4-9 Parts Number Subject To Submission
4-10 When parts supplied by JDI are included
4-11 On submission of MDS Reports
4-12 How to transfer data

4-1 List of JDI Specific Requirements

- For creating an IMDS data sheet, JDI Specific Requirements are in the following. Create an IMDS data sheet that meets the JDI-Specified Requirements.
- After completing data transmission, create MDS Reports to register your reply to jDesc (JDI control system of chemical substances included in supplied products).

Category	Description	Reference slide
Basic items	• Enter a part name/part number as specified by us. • When correcting or re-reporting for the product with the same part number, use a new version upgrade with the same MDS ID remained. • Basically, report a new version with a decimal used. • Check [Forwarding allowed].	14 to 18
Names of materials and goods	Your entry is optional. For the entry, avoid entering "the product name for the name". Suppliers are advised to take into consideration themselves about confidential information.	23
"Prior Declarations" for the preparation step of mass production	Avoid submitting "Prior Declarations" data sheets for the preparation step of mass production unless we ask that.	24
Parts supplied by us	• When parts supplied by us are included, register after removing the parts from the composition. • Report the total weight after the weight of parts supplied by us are excluded.	31
MDS Reports	• After completing data transmission, create an MDS Report to register your reply to jDesc. • For the MDS Reports, submit "the complete report in English based on the JDI perspective".	32 to 34

On each subsequent slide from the next page, 

is attached.

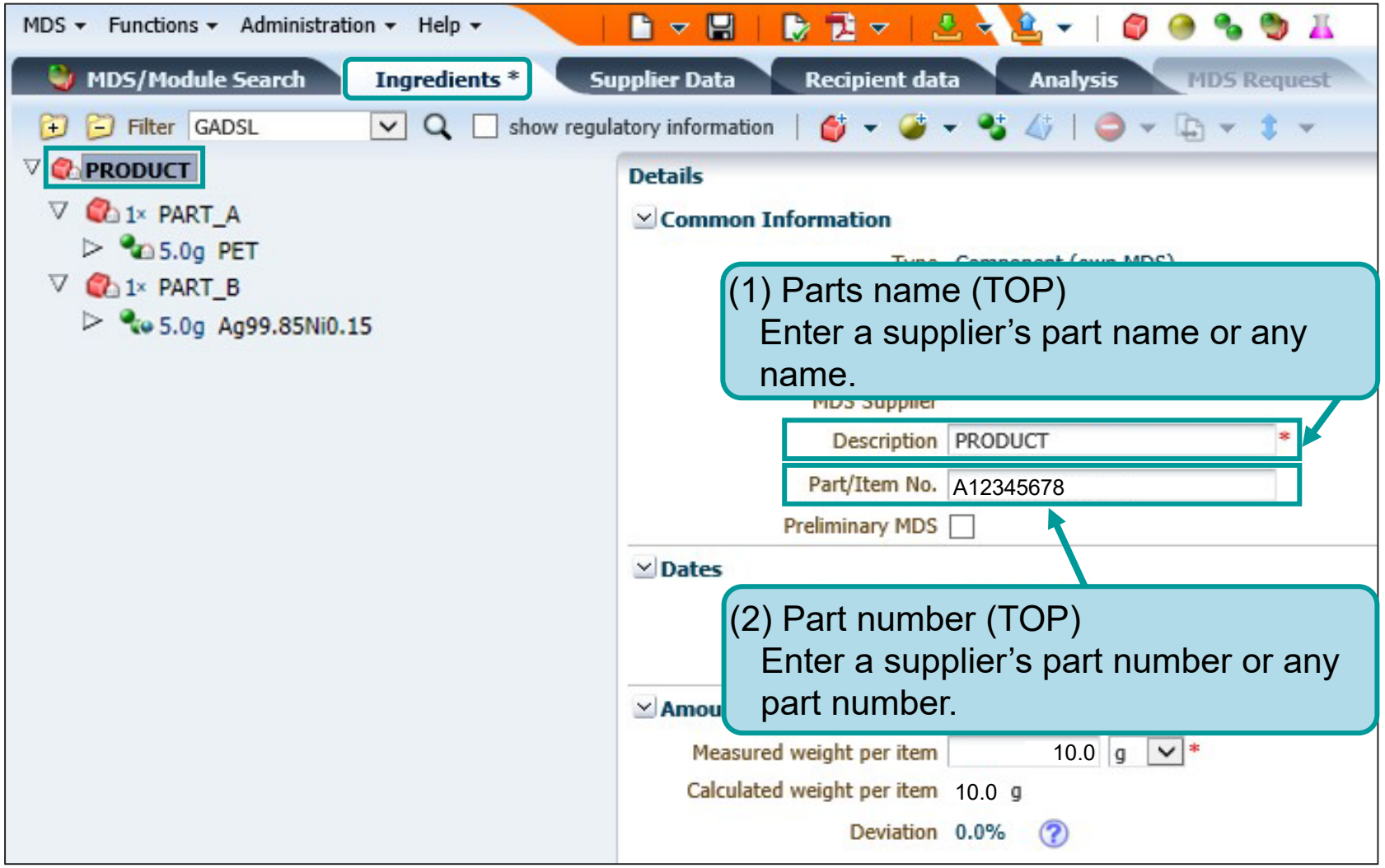
4-2 Basic items

IMDS Screen	Items	How to input
Configuration Information Screen	(1) Parts name (TOP)	• Enter a supplier's part name or any name.
	(2) Part number (TOP)	• Enter a supplier's part number or any part number.
	(3) Part name (subparts)	• Enter a supplier's part name or any part name.
	(4) Part number (subparts)	• Enter a supplier's part number or any part number.
Destination Information Screen	(5) Destination company ID/organization ID	• Select "103885".
	(6) Supplier Code	• Enter the Supplier Code. (optional)
	(7) Name	• Enter JDI Item Name.
	(8) Part/Item No.	• Enter JDI Item Number.
	(9) Forwarding allowed	• Check [Forwarding allowed].
Common to all screens	(10) ID/Version	• When correcting or re-reporting for a product with the same part number, use a new version with the same MDS ID. • Basically, send a version with a decimal used. * If responses described above such as transferring data sheets received from suppliers are prohibited, transferring a new MDS ID/integer version is allowed.

JDI Specific Requirements

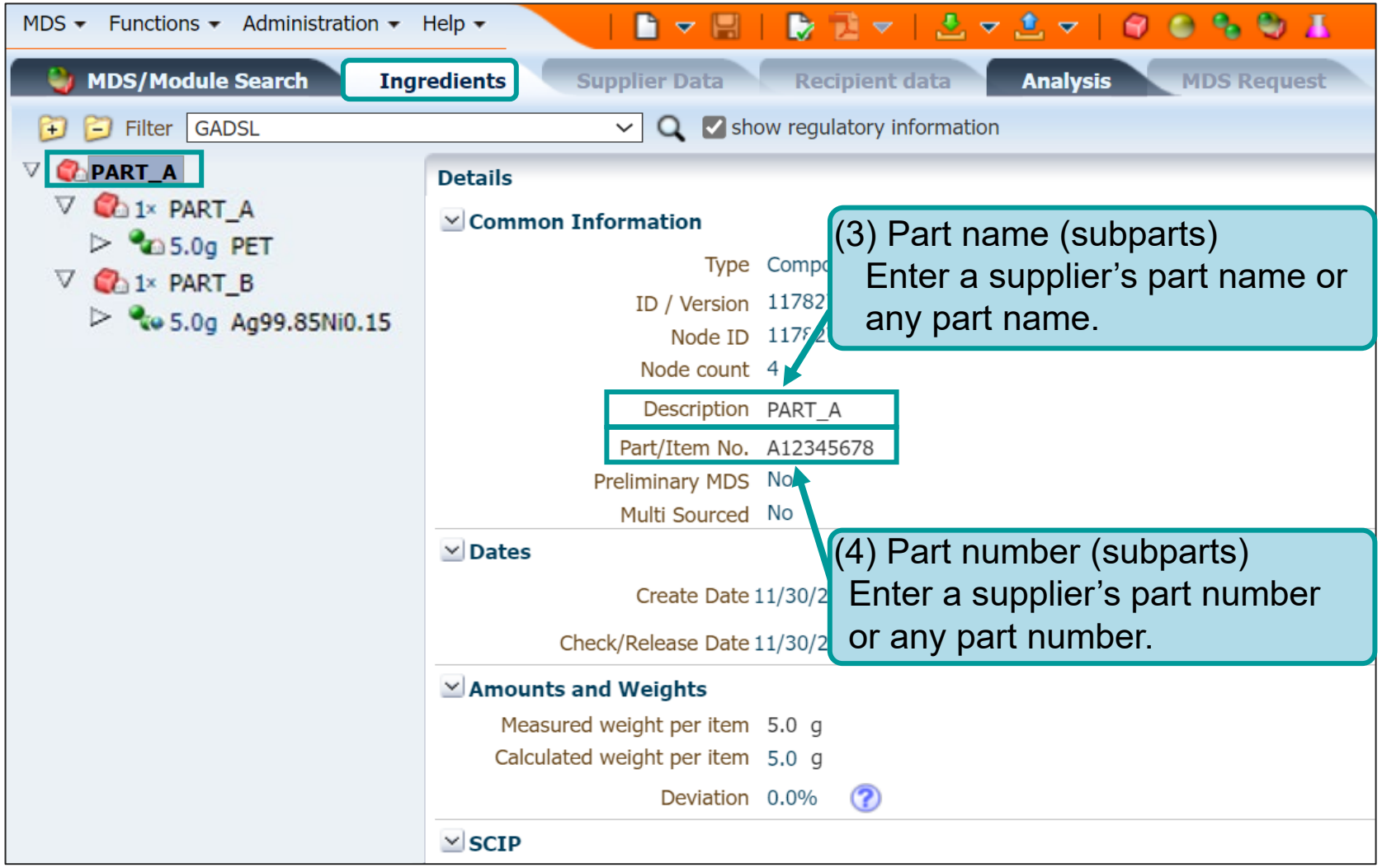
4-2 Basic items

<Configuration Information Screen>



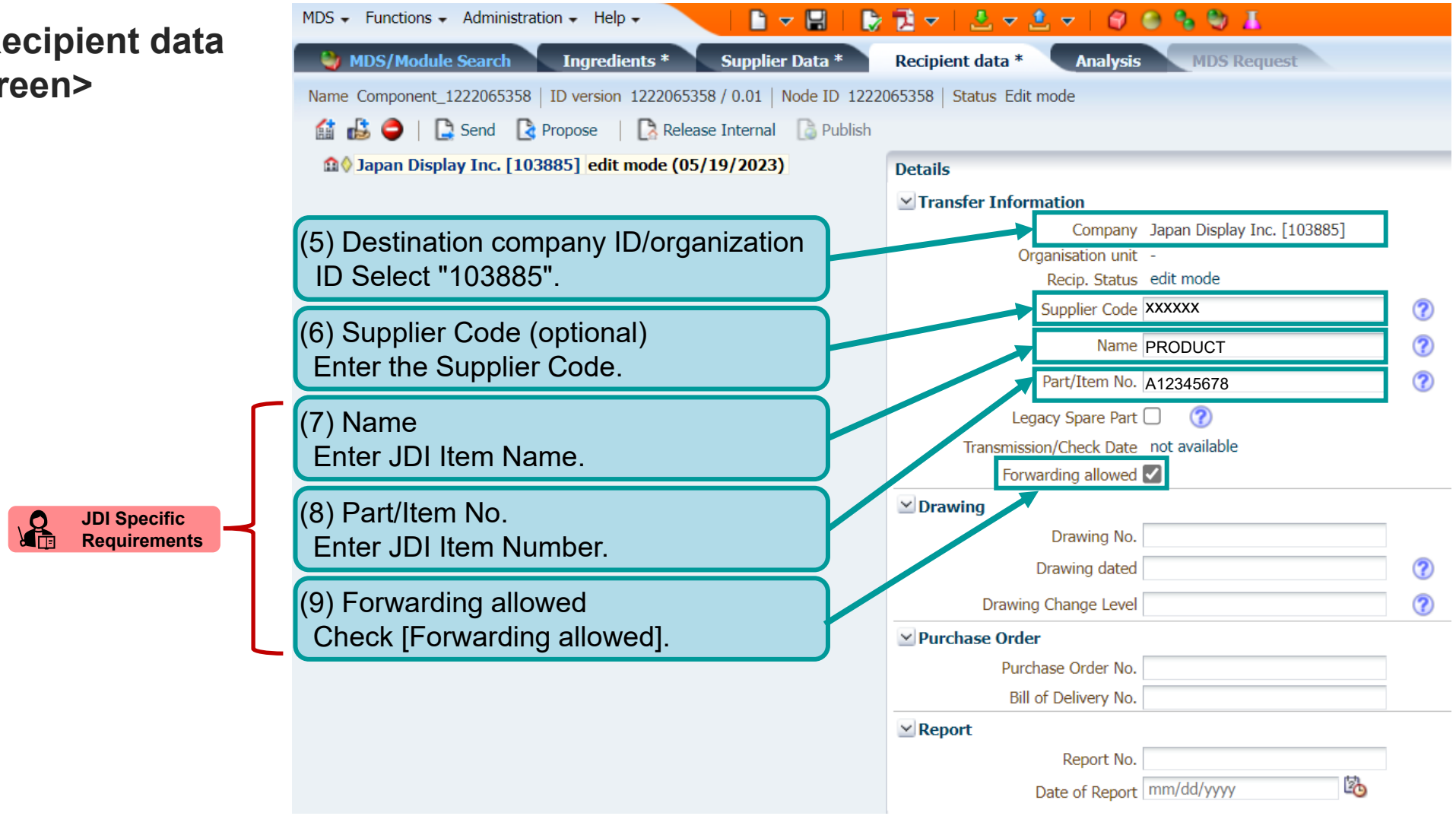
4-2 Basic items

<Configuration Information Screen>



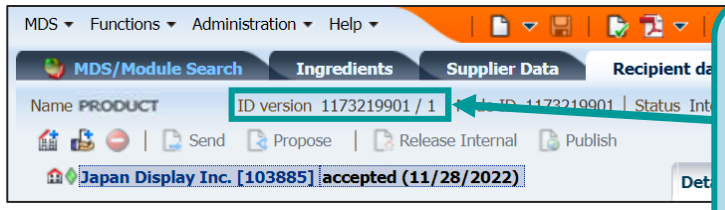
4-2 Basic items

<Recipient data screen>



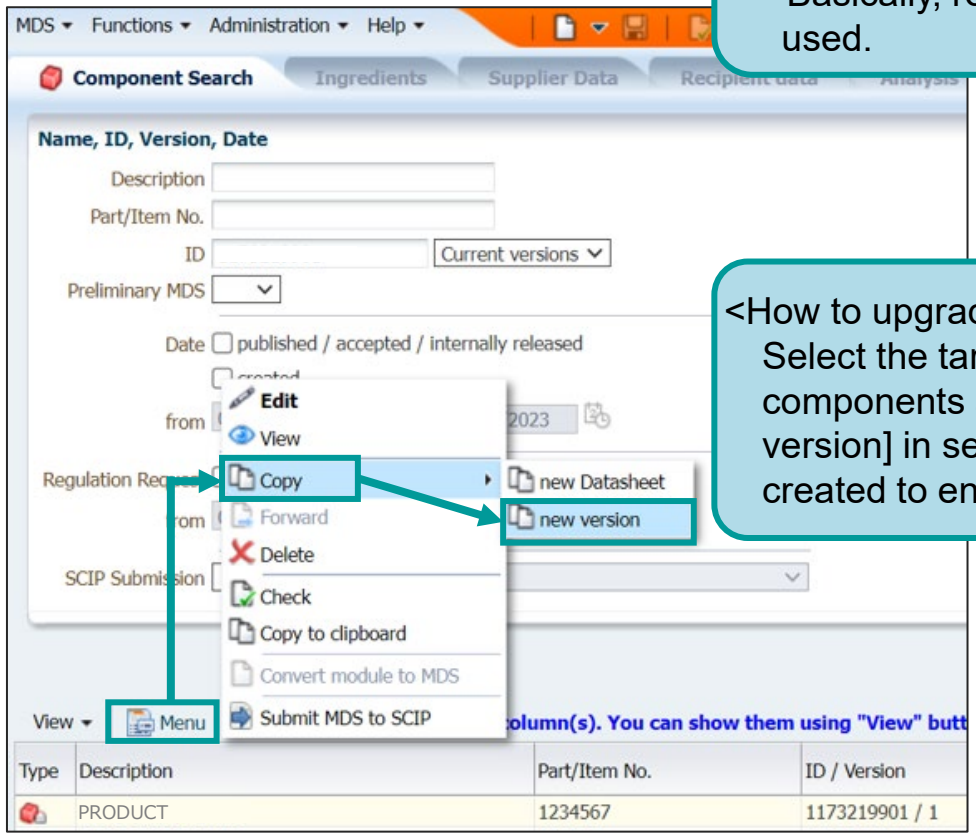
4-2 Basic items

<Common to all screens>



(10) ID/Version
- When correcting or re-reporting for the product with the same part number, use a new version with the same MDS ID basically.
- Basically, report a new version with a decimal used.

JDI Specific Requirements



<How to upgrade the ID version>
Select the target data displayed by searching the components and select [Menu] ⇒ [Copy] ⇒ [new version] in sequence. The data sheet upgraded is created to enable editing.

4-3 IMDS Committee-Approved Materials

- In the IMDS rule, when IMDS committee-approved materials are provided in official standards, the materials shall be used.
- When the material is provided, use material data sheets disclosed by the IMDS steering committee instead of creating a data sheet on your own. (IMDS Recommendation 4.4.1.1)

*** What is the IMDS Committee-Approved Material?**

- The material above is the standard material (that means the data sheet disclosed by the IMDS steering committee).
- In the IMDS, official standard materials specified by international standard organizations such as EU (including EN･DIN standards), Japan (JIS standard), U.S. (ASTM standard･ UNS standard), ISO standard are registered as IMDS committee materials.

4-3 IMDS Committee-Approved Materials

<How to input IMDS Committee-Approved Materials>

(1) Confirming material information

- Confirm JIS standard numbers and material codes based on information such as specifications, drawings, JIS standard numbers or others.

<Example>An example of stainless-steel bar is given.

JIS standard number: JISG4303 Material Code: SUS316N

JIS standard numbers and Material Codes can be confirmed on the website of the JIS standard or other sources.

JIS standard website: http://www.jisc.go.jp/

An excerpt from the JAPIA external list in the following, "MAT" sheet can also be referred.

Material name	–	Norms/Standards (Public standard)	Material number (Metal or other than plastics or rubber materials)	Material symbol (plastics or rubber)	VDA Classificatio	IMDS Name
Stainless Steel SUS316N	–	JISG4303	SUS316N		1.1.2	SUS316N

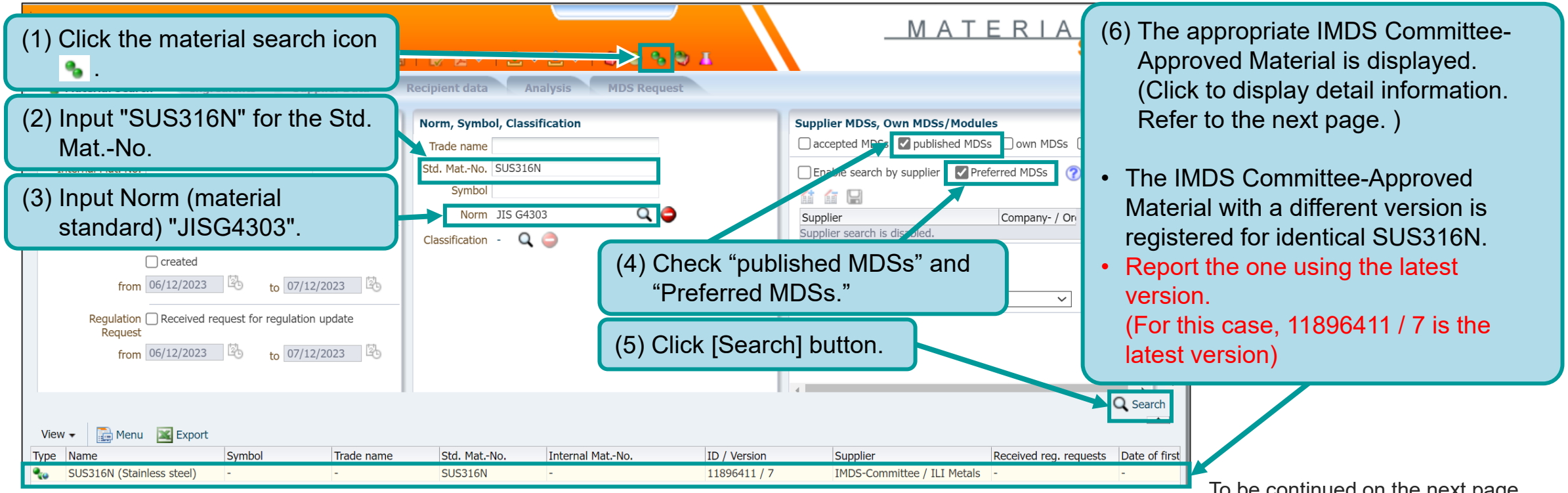
AT | MAT | UNIT2 | IMDS_PCTYPE | IMDS_NORM | IMDS_CATEGORY

To be continued on the next page

4-3 IMDS Committee-Approved Materials

(2) Confirming the IMDS registrations

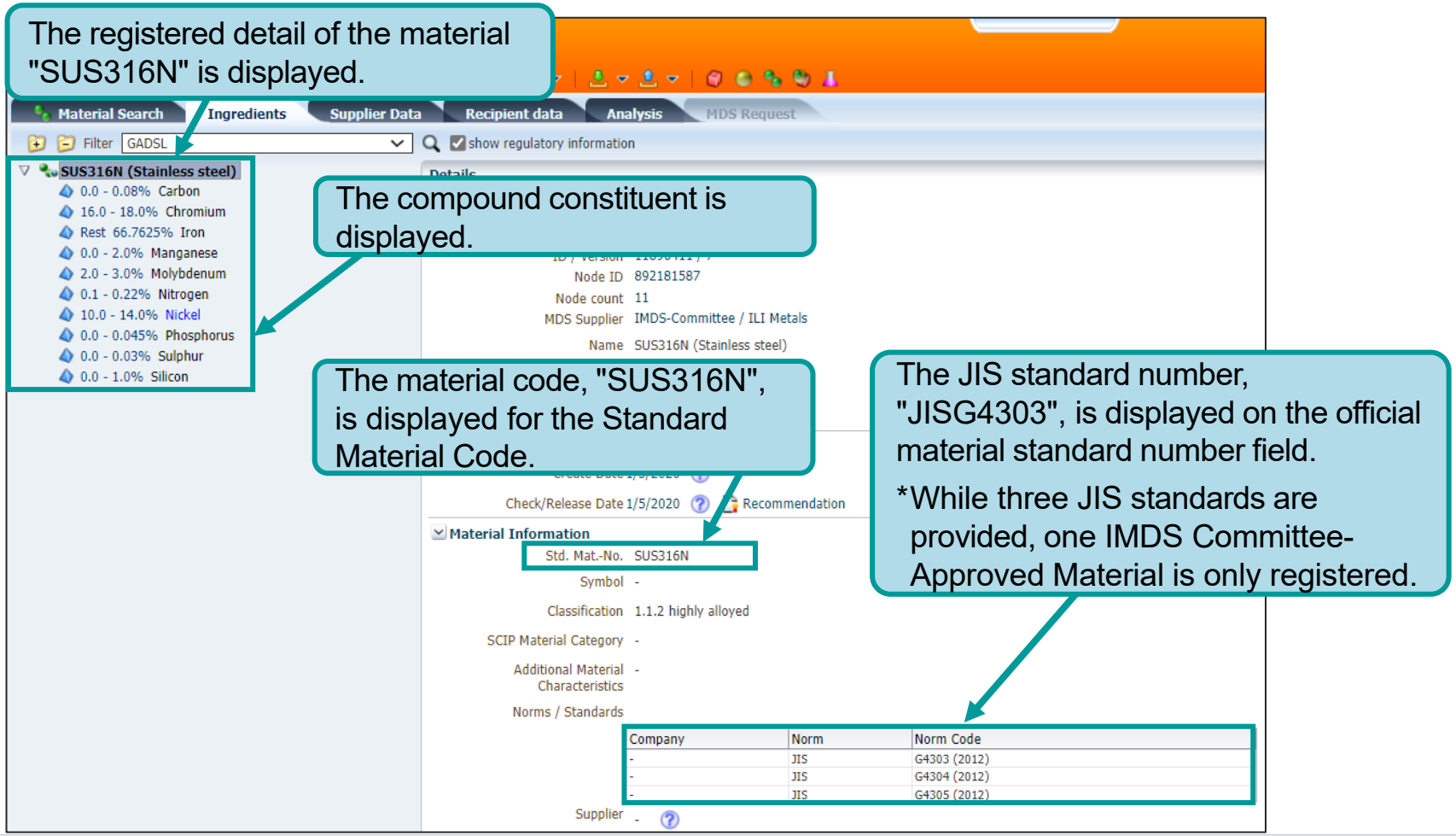
- Enter the JIS standard number: JISG4303 and the Material Code: SUS316N on the Material Search Screen of IMDS.
- The IMDS controls materials by setting the module ID and its version.
  New version data may be registered in case of updating official standards and correcting a clerical error or other events.



To be continued on the next page

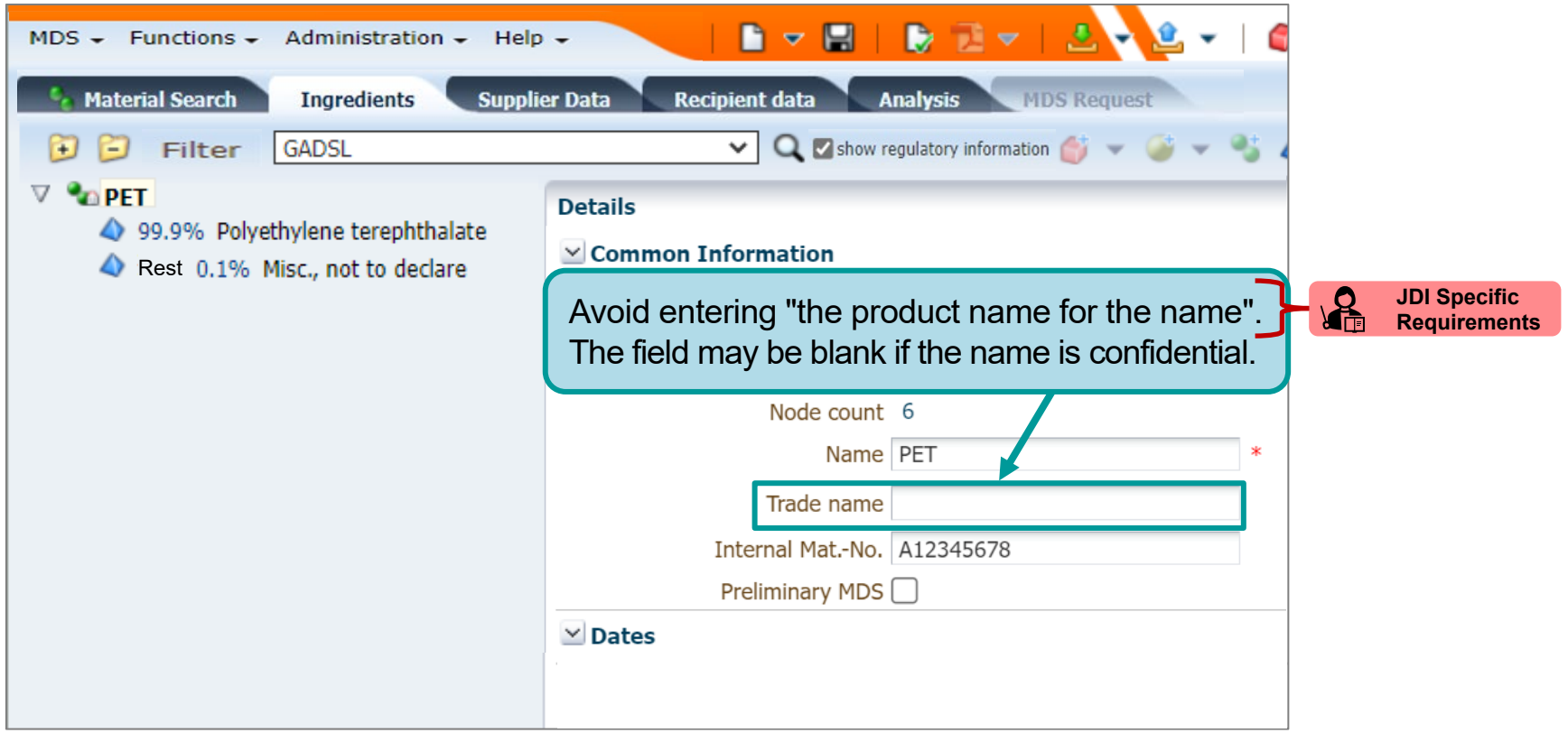
4-3 IMDS Committee-Approved Materials

(3) Confirming the IMDS registrations



4-4 Names of materials and goods

- Input is optional. For the entry, avoid entering "the product name for the name."
- We are not allowed to correct data received from suppliers. Suppliers are advised to take into consideration themselves about confidential information of products/materials or its related information.



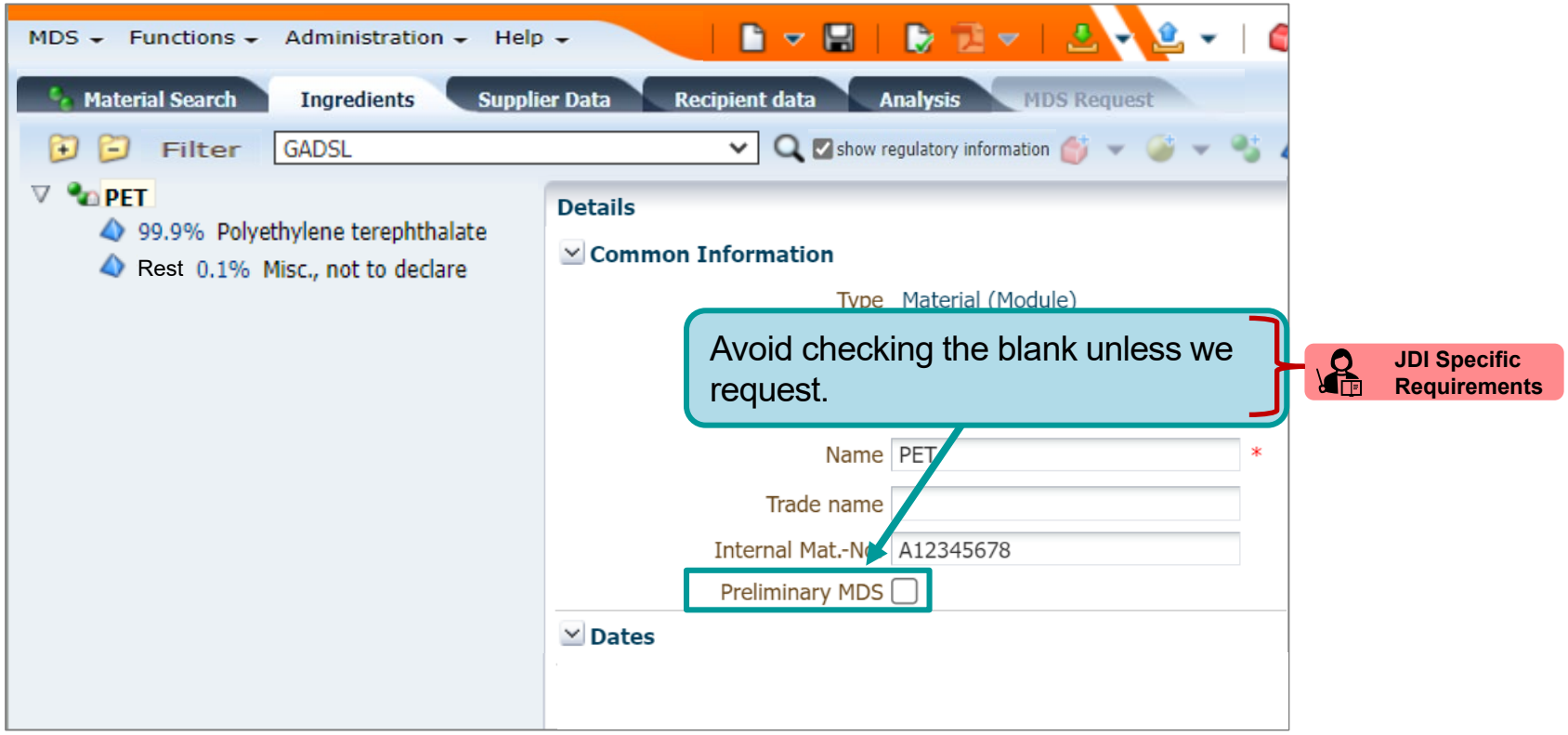
*Contact us separately if a material name cannot be corrected because a material manufacturer has prepared the material or other reasons.

4-5 "Prior Declarations" for the preparation step of mass production

- Submit data of mass-produced parts to us.
- Avoid submitting "Prior declarations" data sheet for preparation of mass production step unless we ask that.

[Notes]

- Data received from overseas second suppliers may include data with data checked in the diagram below included. If those data are included, our customers may refuse to receive them. In that case, note that re-submission and re-investigation will be required, even if those data are identical.



4-6 Application Code

<Entry rule>

- Enter the code that meets the application of the product in the Application Code.
  * When entering 0.1% or more of lead as impurity, report it using "Application Code 44". Avoid entering "0" for the minimum because the Application Codes other than 44 to 47 would be intentionally used. For those cases, we may request corrections if our customer asks us to do it.

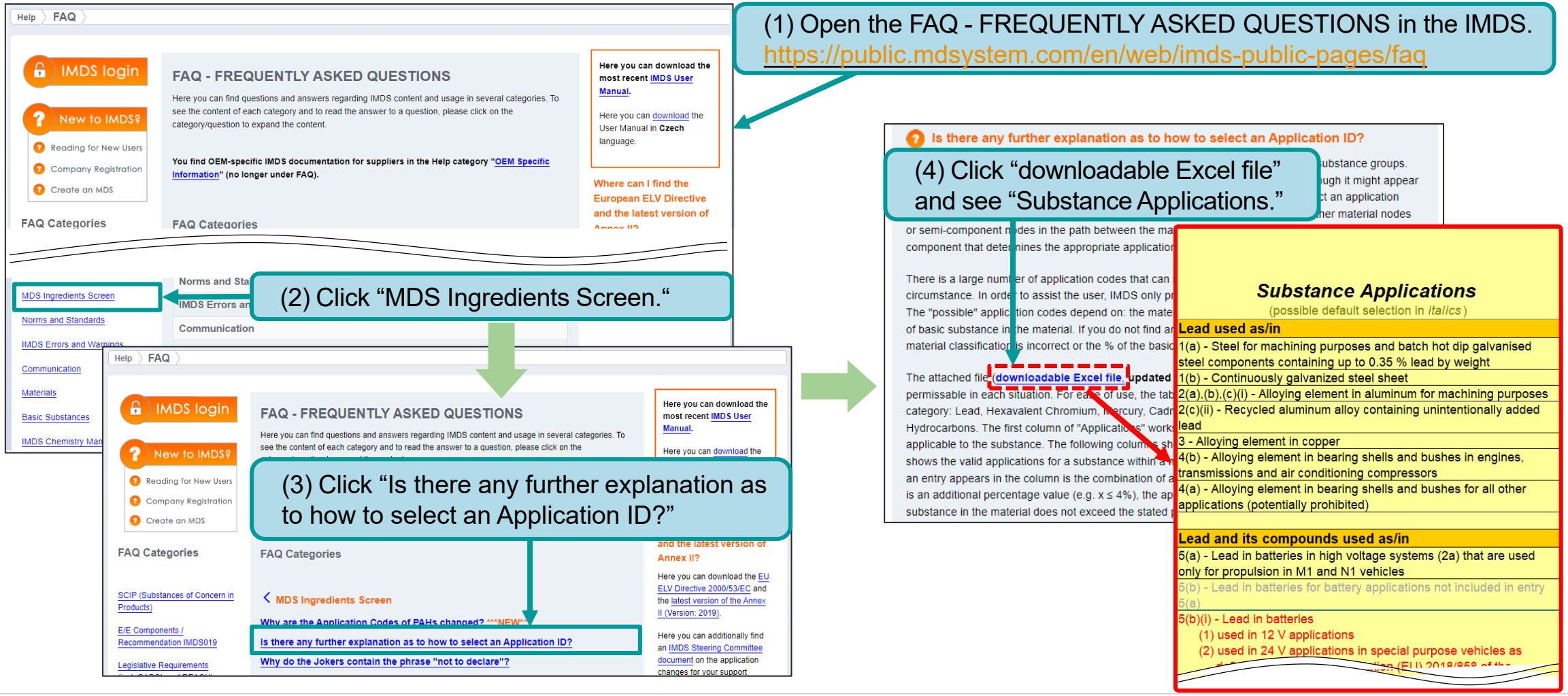
- If changes in exemption of product item (fragmentation of Application Codes) and disabling of Application Codes (13, 16, 58, etc.) are provided, we may request updating of data already reported.

- When creating a data sheet, use the latest Application Codes, reviewing "How to find the latest Application Codes" on the next page.

To be continued on the next page

4-6 Application Code

<How to confirm the latest Application ID>



4-7 Filler Code

Create a Filler Code based on the Compound Information of fillers and enter it in the Material Data field.

- When two kinds of fillers are provided, enter them in descending order of the component ratio following "+" like -(GF20+TD10).
- Express a filling rate numerically by an integer rounded off one decimal place. (Example：10.3→10、11.8→12)

Information of 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, for coloring a resin (black), carbon powder is mixed in 15%, enter carbon (carbon: C)・powder (powder: D)・15% ⇒ -CD15.

Filling rate (%)	Filler Code (-$)
15	**-CD15**

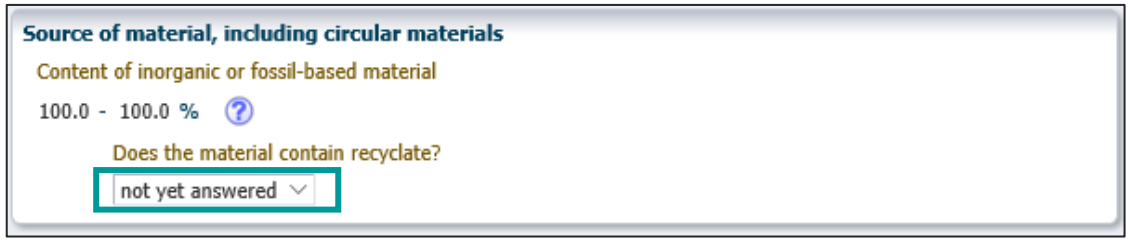
<Example 2>
If, for preventing thermal expansion of resins, glass fiber is mixed at 30%, enter glass (glass: G)・fiber (fiber: F)・30% ⇒ -GF30.

Filling rate (%)	Filler Code (-$)
30	**-GF30**

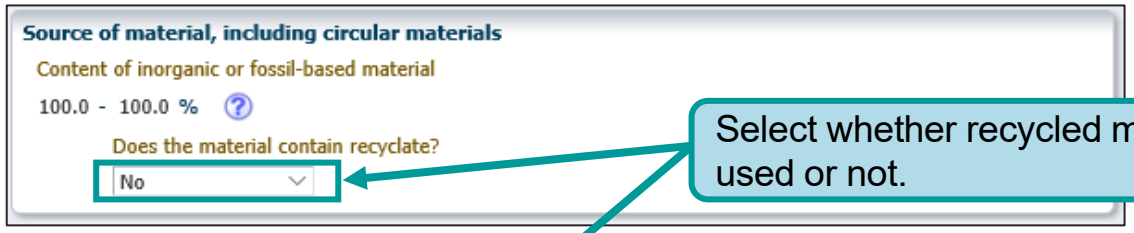
4-8 Recyclate Information

- Select whether recycled materials are used or not. *Be sure to input recycling information that causes an error in the IMDS error check.
  When the recyclate is used, please input all the required items.

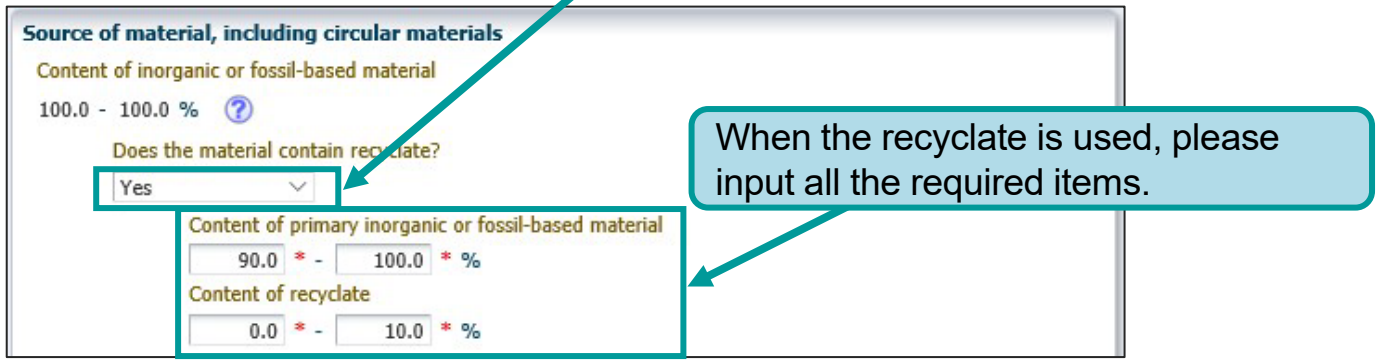
NG



OK



OK

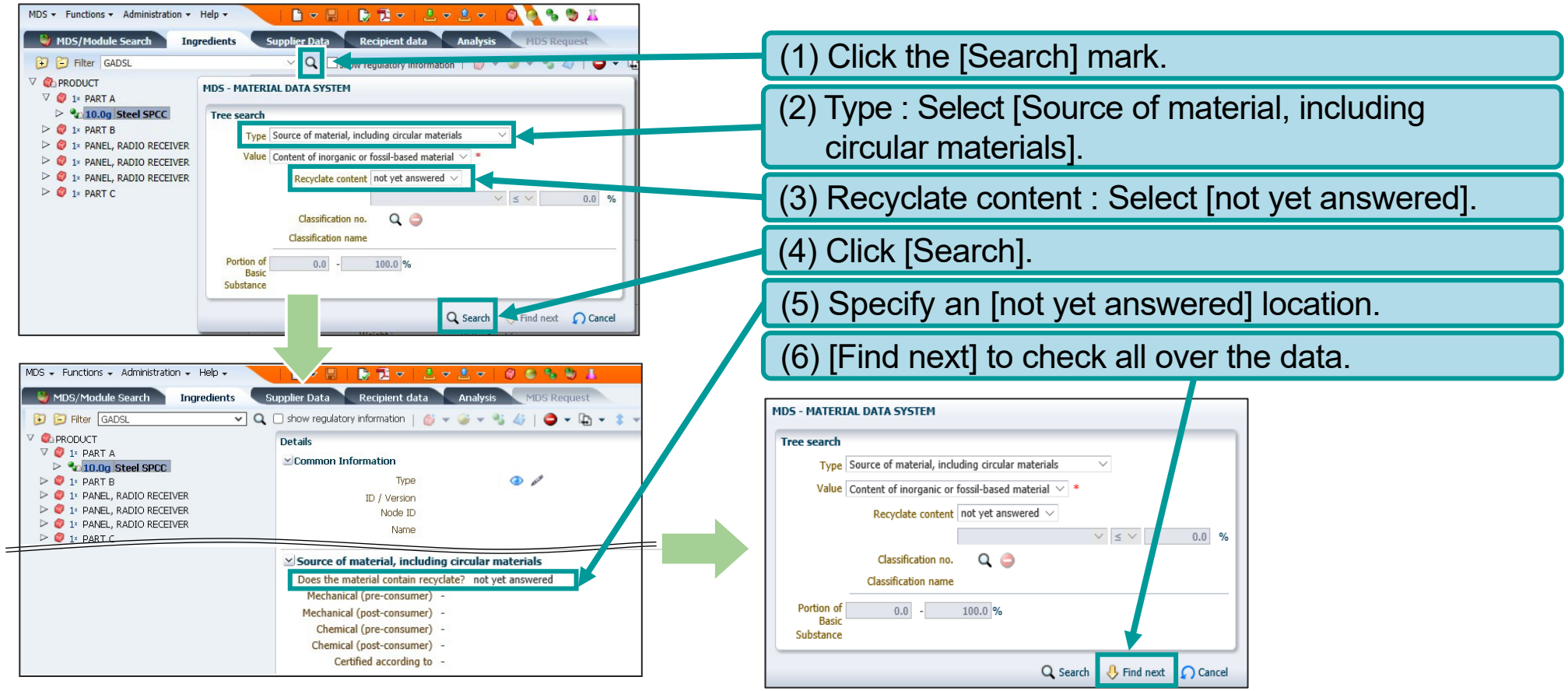


To be continued on the next page

4-8 Recyclate Information

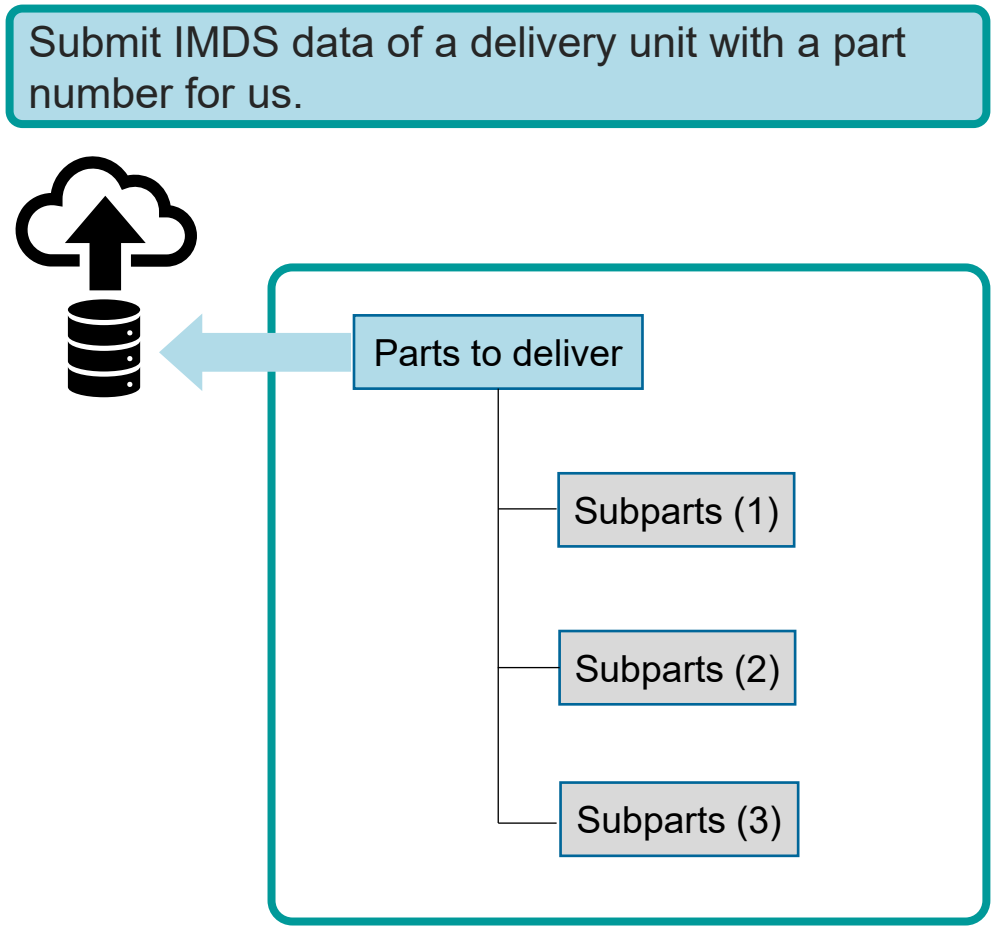
<How to check response to Recyclate Information>

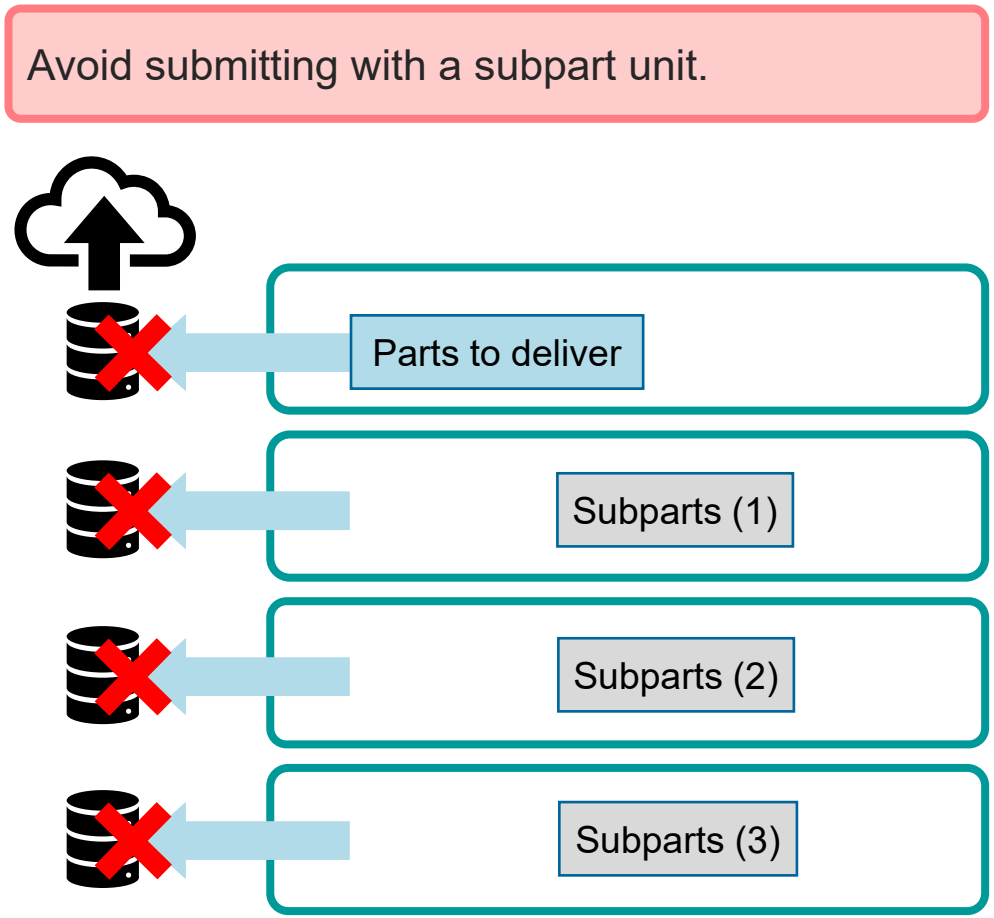
- Responses for Recyclate Information can be checked by the search function of IMDS.



4-9 Parts Number Subject To Submission

Submit IMDS data of a delivery unit with a part number for us.
Avoid submitting with a subpart unit.





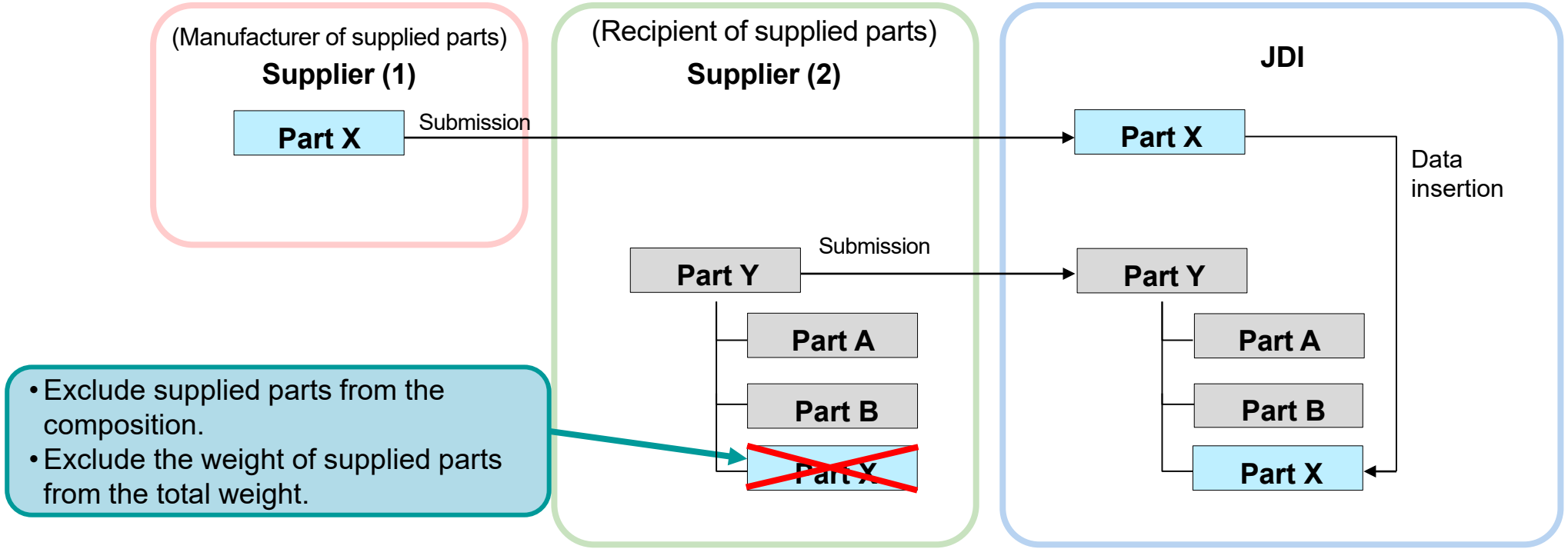
4-10 When parts supplied by JDI are included

JDI Specific Requirements

- When parts supplied by us are included, register after removing the parts from the composition.
- Report the total weight after the weight of parts supplied by us are excluded.

<Corresponding example>

Part X : Parts supplied by JDI



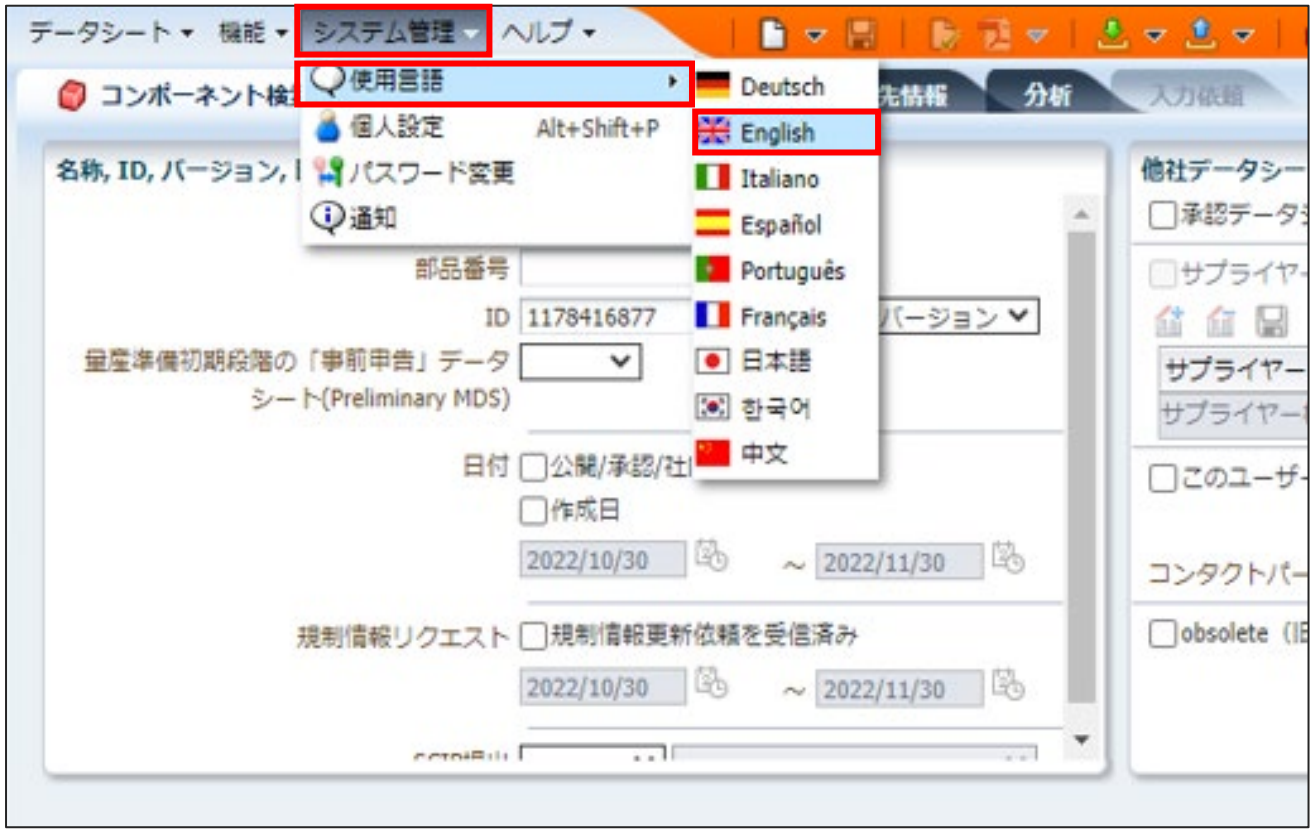
4-11 On submission of MDS Reports

JDI Specific Requirements

After completing data transmission, create an MDS Report in English to register it to jDesc (JDI Control System of Chemical Substances included in Supplied Products). In terms of how to register in jDesc, check the "jDesc Operation Manual for Supplier".

<How to create the MDS Reports in English>

(1) Select [System control] ⇒ [Language] ⇒ [English].



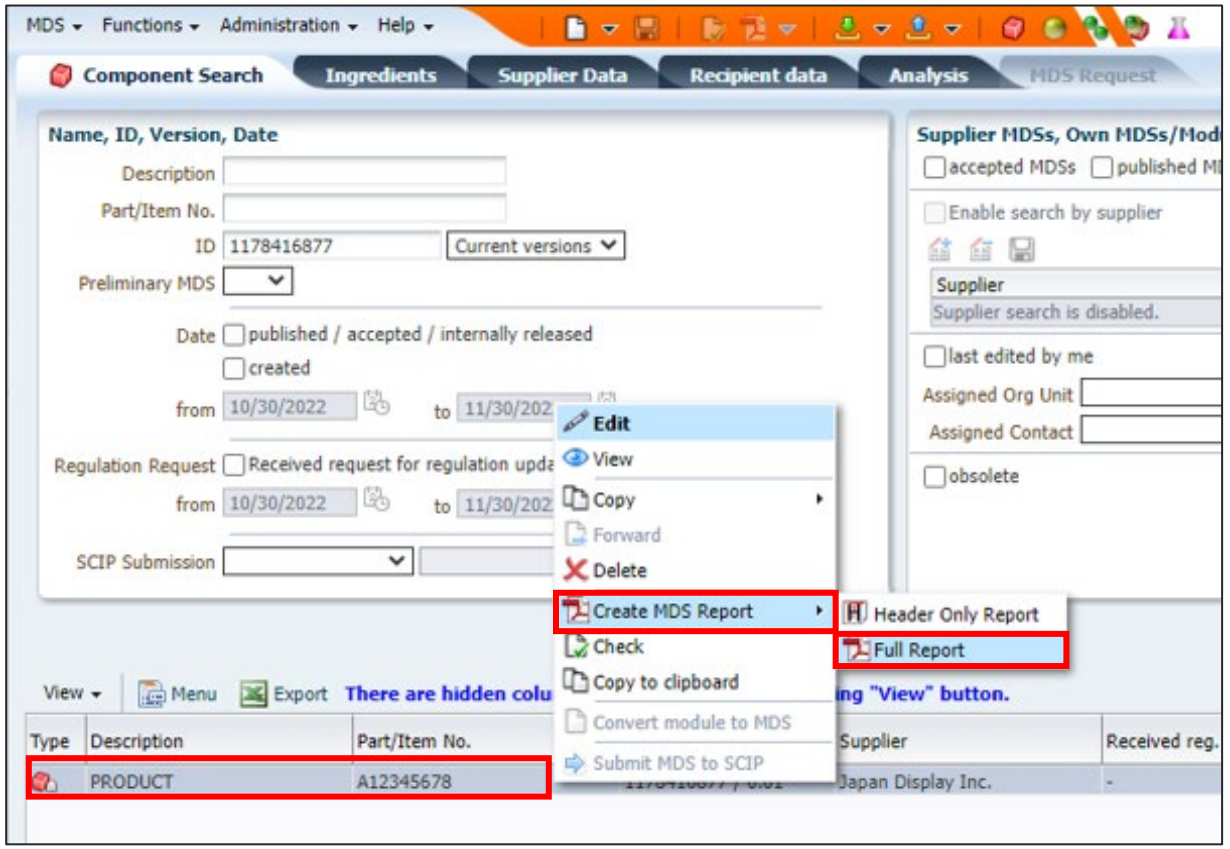
To be continued on the next page

4-11 On submission of MDS Reports

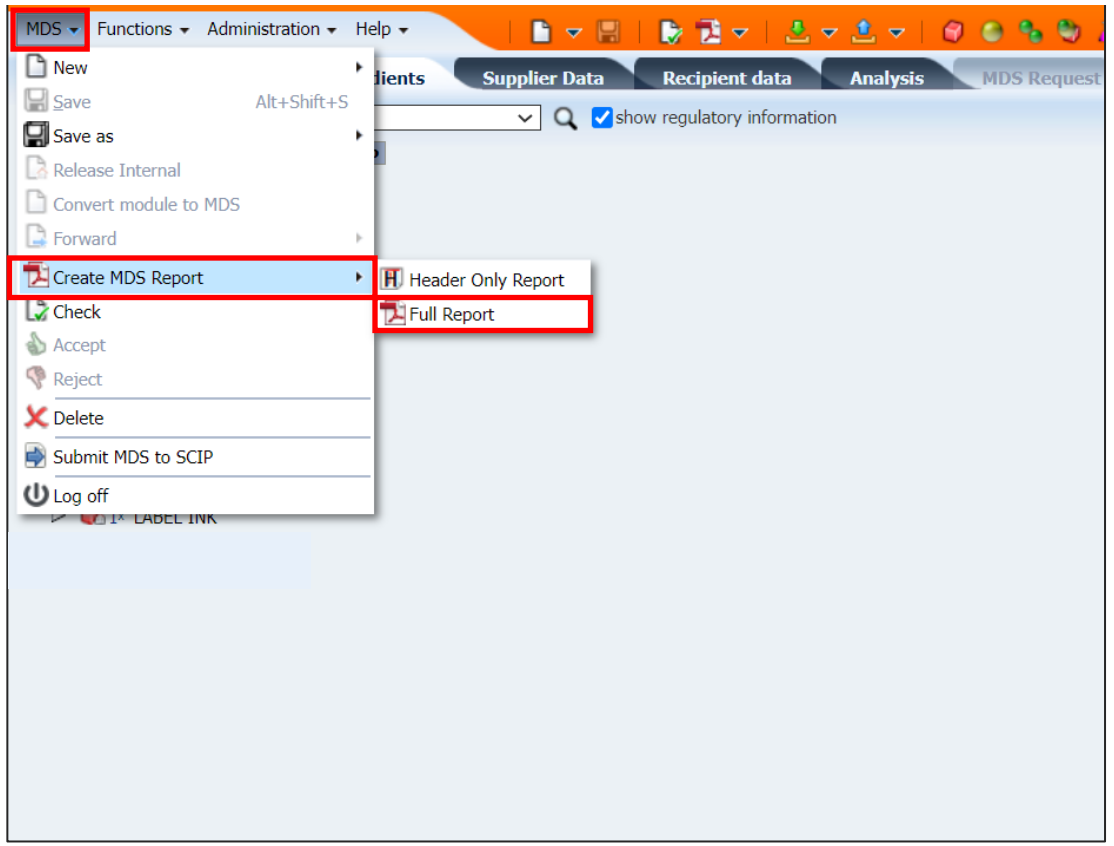
JDI Specific Requirements

(2) Select [Create MDS Report] ⇒ [Full Report] Both a) and b) as follows are available.

a) Select [Component Search] to right-click to select.



b) Select from [MDS] with the data sheet open.

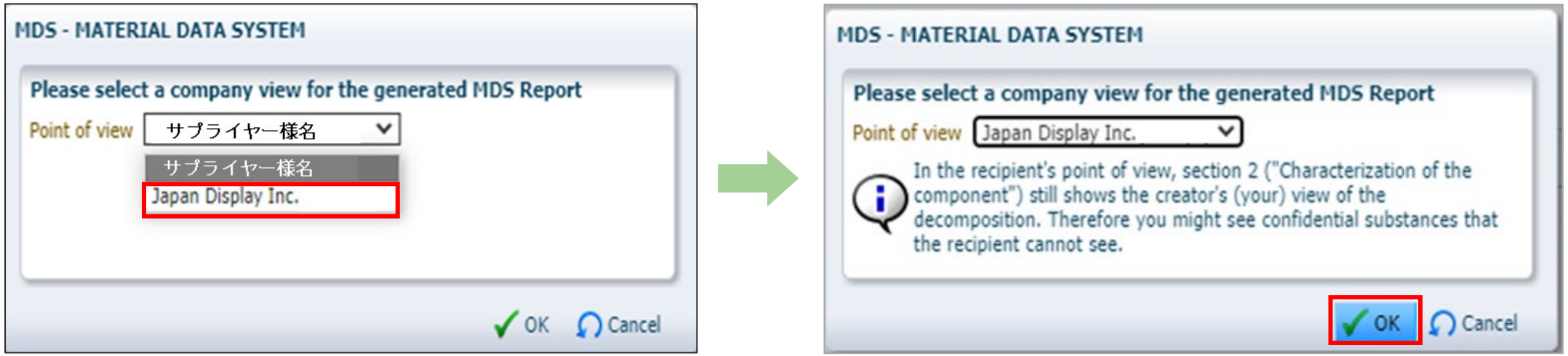


To be continued on the next page

4-11 On submission of MDS Reports

JDI Specific Requirements

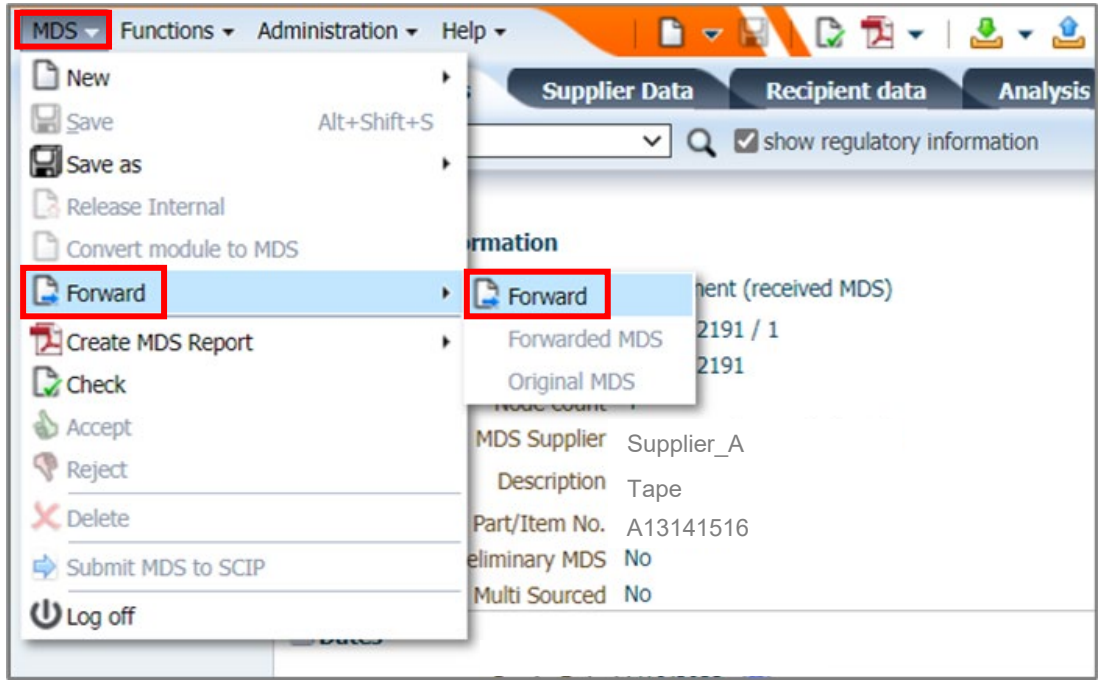
(3) Select [Japan Display Inc.] to create a report on JDI perspective.



4-12 How to transfer data

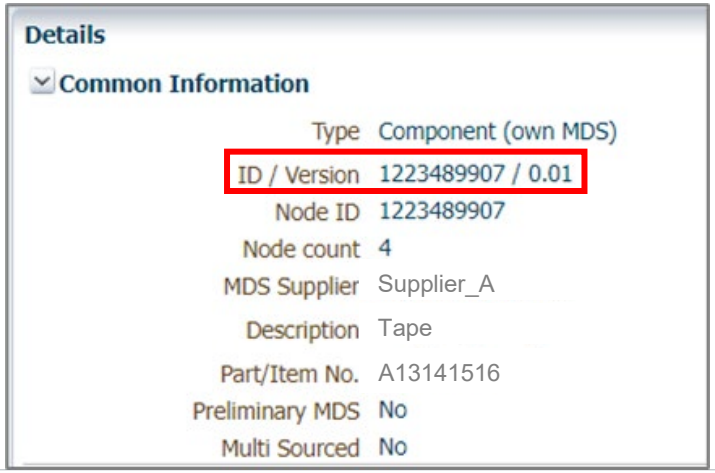
When the data sheet received from the supplier is submitted to us as is, transfer it as follows.

(1) Select [MDS] ⇒ [Forward].



(2) Select [OK].

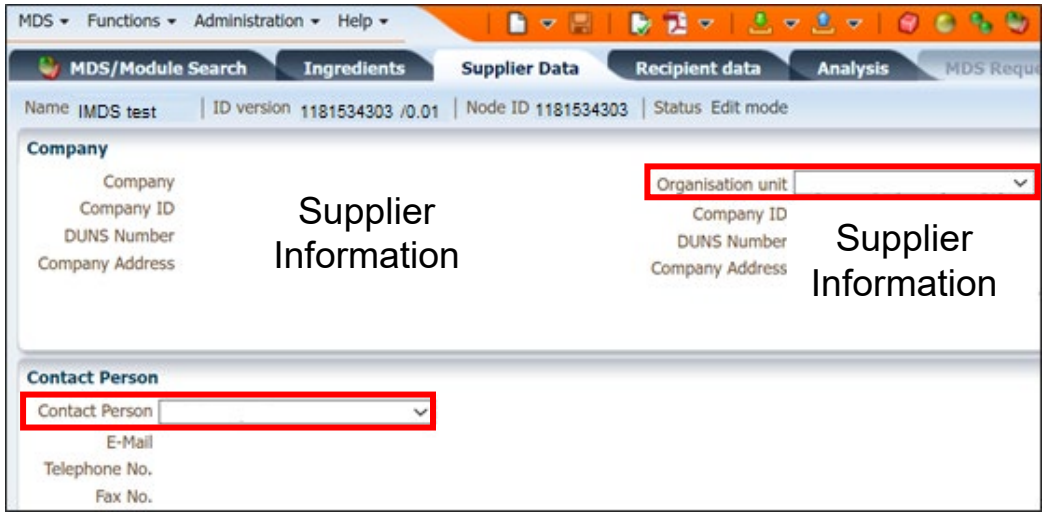
The data sheet is created with a new ID.



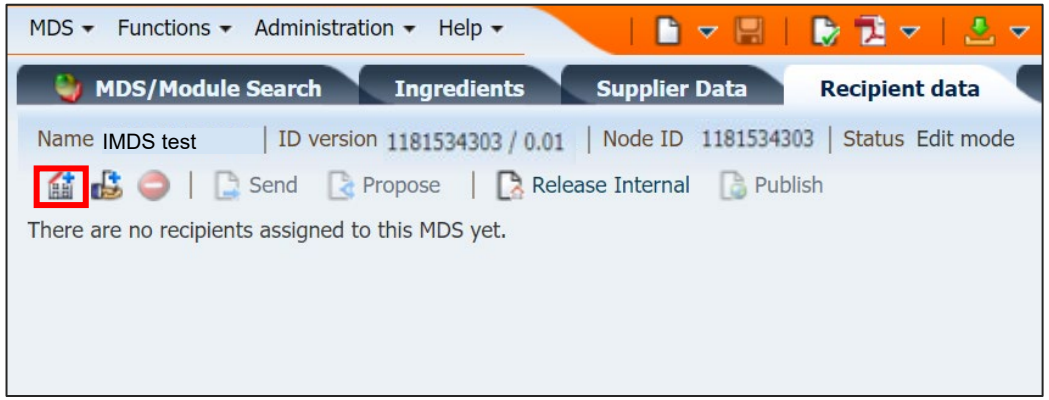
To be continued on the next page

4-12 How to transfer data

(3) Input into the [Supplier Information] sheet.



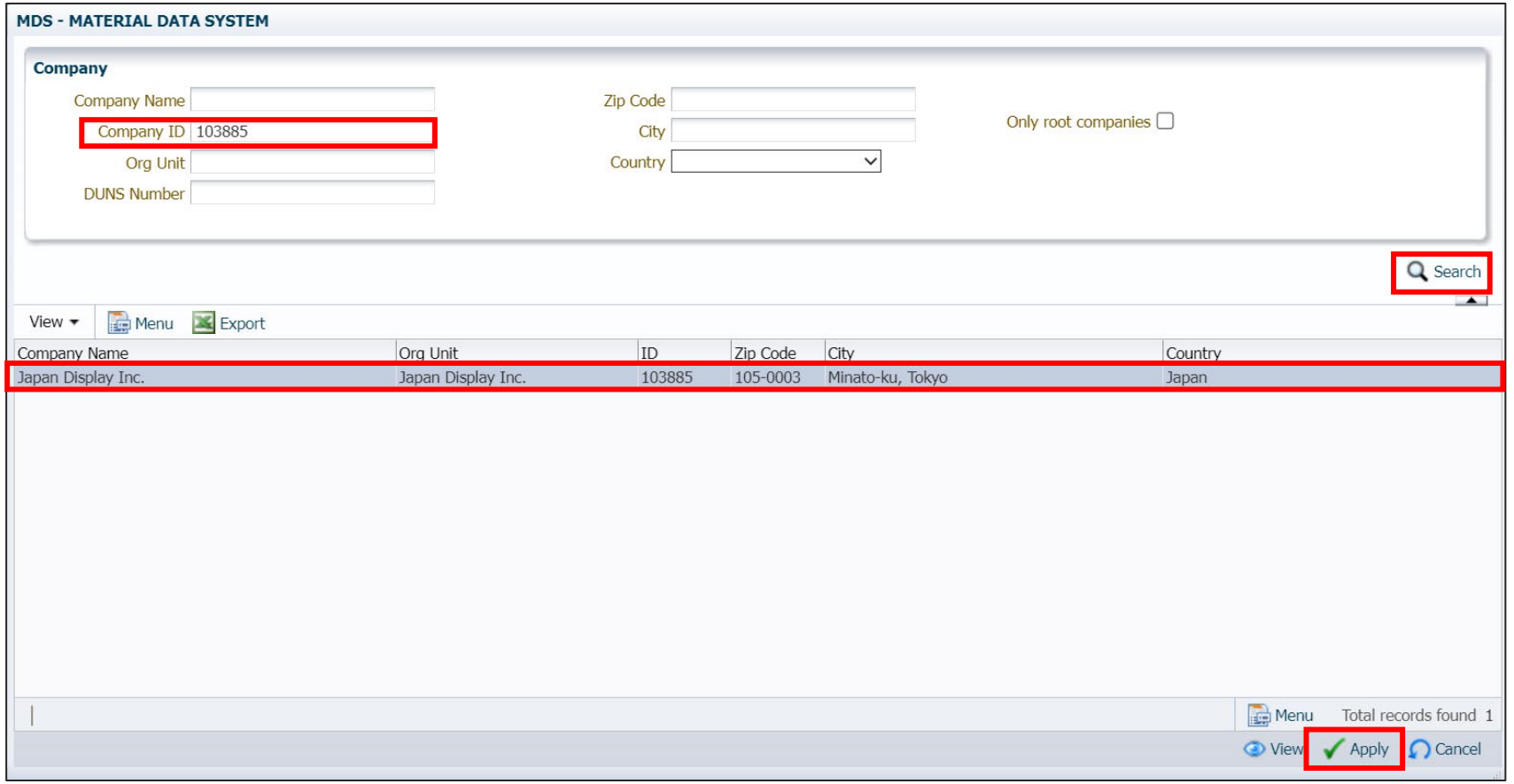
(4) Input into the [Destination Information] sheet.



To be continued on the next page

4-12 How to transfer data

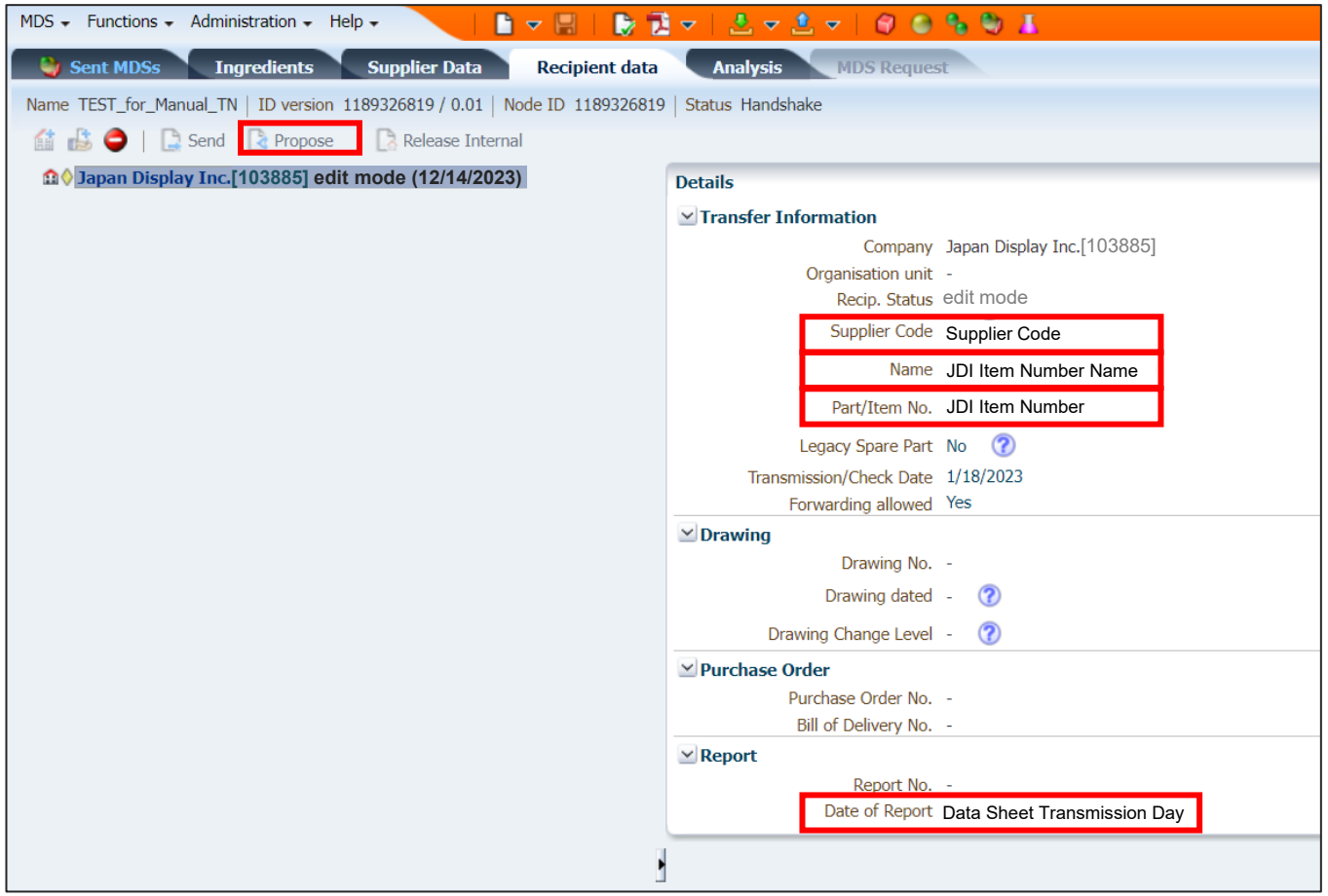
(5) After entering company ID "103885", click [Search]. Select the company name displayed to click [Apply].



To be continued on the next page

4-12 How to transfer data

(6) Input the following items to select [Send All].
* [Transmission] is unavailable for transferring.



Japan Display Inc.

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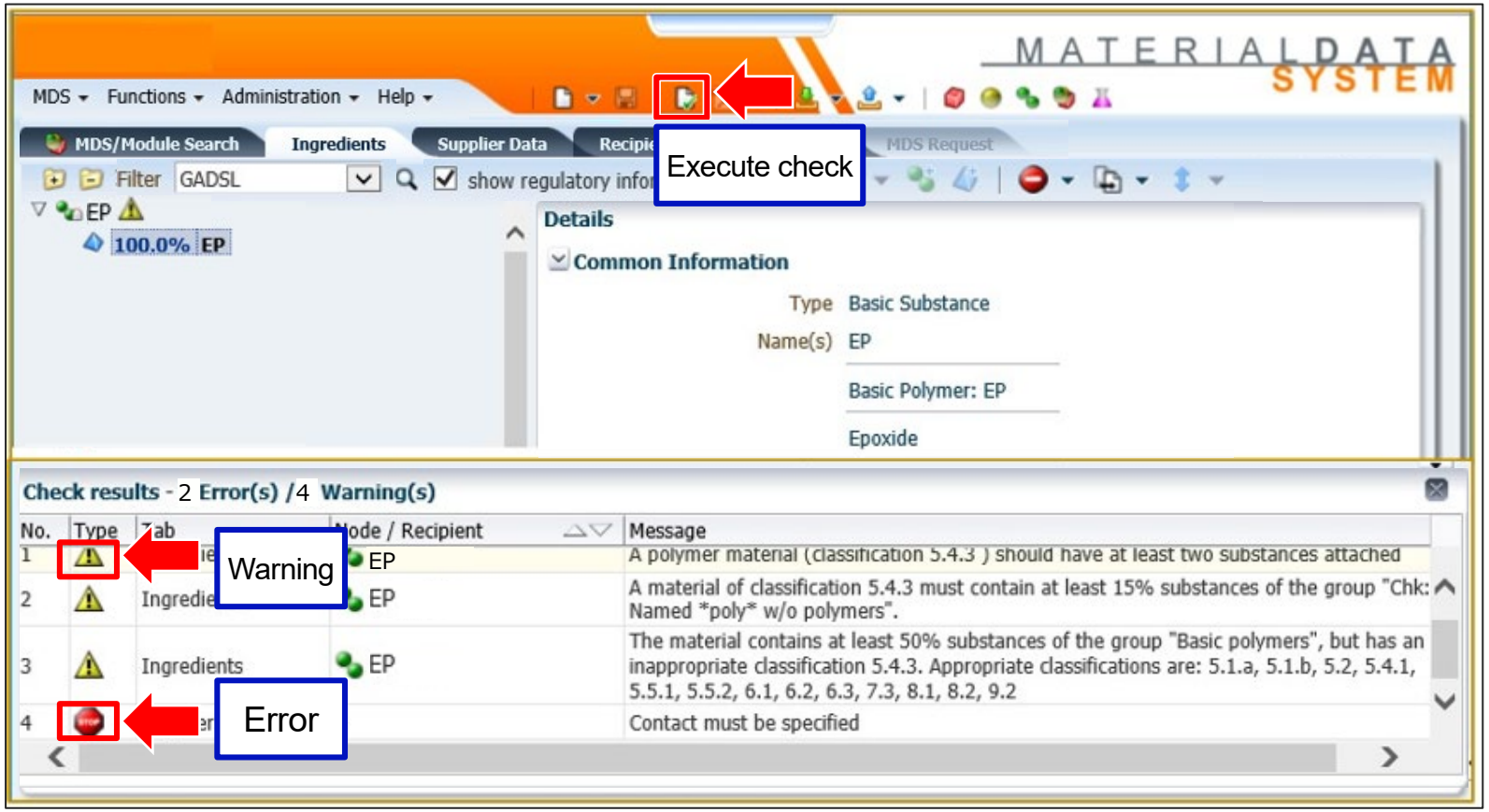
5 Warning in IMDS

5-1 Confirming errors and warnings
5-2 Corrective actions

5-1 Confirming errors and warnings

When the Error/Warning is displayed after the Error Checking of IMDS is carried out, confirm the error detail and report it after correction.

[How to check Error/Warning in IMDS]



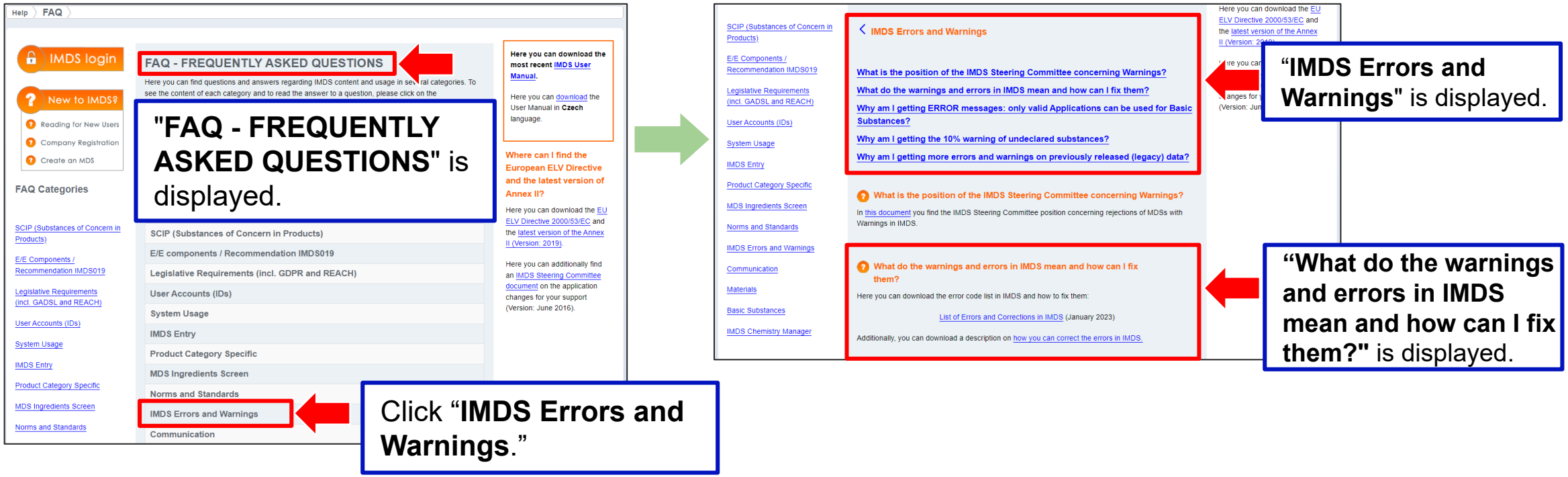
[How to check warning details]

Confirm warning details on the following URLs.

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

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

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



5-2 Corrective actions

We are not allowed to correct received data in MDS.

- All errors shall be corrected.
- Please confirm and correct what the warning indicates according to the details in the following pages. We do not necessarily ask you to correct all warnings but may ask you correction according to a customer’s request or other cases.

  (Even if we have once approved the warning, please do it likewise the above.)

(1) When a part and a material are on the same layer under a part

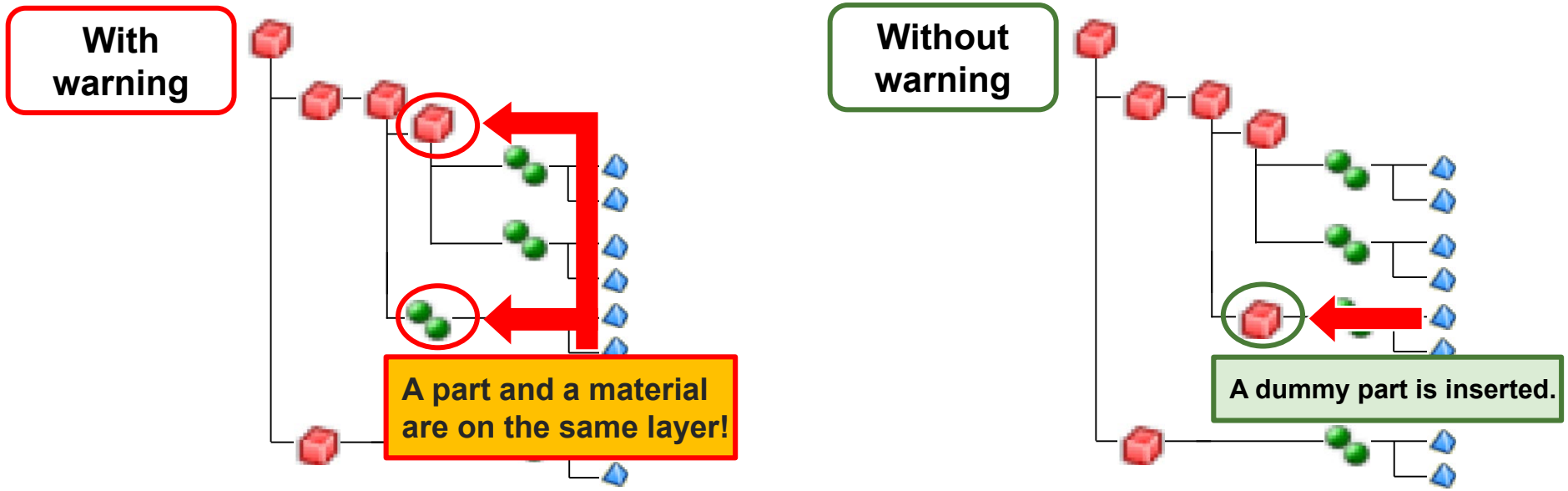
[Checking in IMDS: On placing different types of items on the same level Refer to (IMDS User's Manual 3.3.17 Check Procedure)

- When a part and a material are placed under the identical main parts in the IMDS, a warning is displayed.

[How to deal with warnings]

- Insertion of a dummy part such as the right bottom diagram avoids a warning.

* Names for "dummy parts" are optional but using a material name is recommended.



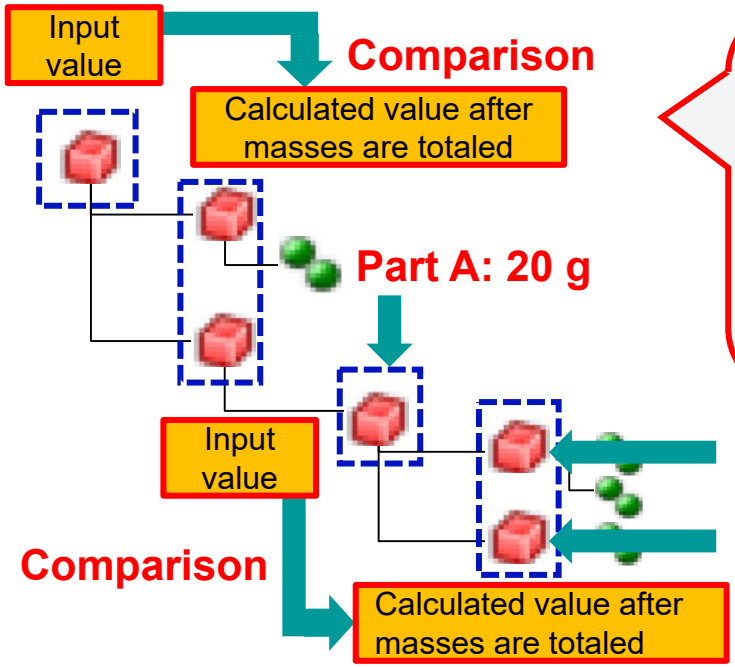
[Note] Report in the status without this warning!

(2) When the maximum deviation of part mass exceeds the reference value of IMDS

[Checking in IMDS: The maximum deviation based on the Parts Mass]

Refer to (IMDS User's Manual 3.3.17 Check Procedure)

- IMDS checks the maximum deviation of subparts based on the mass value of main parts.
  * The Error Checking is carried out for all layers of the parts structure.
- **Any values shall fall within the reference value range to avoid warnings.**
  (Because the mass value cannot fall within the tolerance when we report products data to customers.)



For the main Parts Mass of 20 g, in the left example, the calculated value of masses of subparts totaled is 23 g. **The warning is displayed** because that means the deviation of 15%**!**

[Reference value on Error Checking]

Main Parts Mass [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

[Note] Report in the status without this warning!

(3) When the content rate range of compound exceeds the reference value of IMDS

[Rule in IMDS: The maximum deviation based on the Parts Mass]

Refer to (IMDS Recommendation 001 4.5.4 Portion (Percentage) Ranges, IMDS User's Manual 3.3.17 Check Procedure)

- The tolerance (minimum value－ maximum value) in the content rate of compound is provided in the following. Report the content rate so that it falls within the tolerance range.

* If a material is defined based on official standards, it is accepted that the content rate may exceed the tolerance range.

[Range value of the content rate]

Content rate of compound Maximum = Y% Minimum = X%	Tolerance range M = Y% - X%
0 ≤ X ≤ 7.5	M ≤ 3
7.5 < X ≤ 20	M ≤ 5
20 < X ≤ 100	M ≤ 10

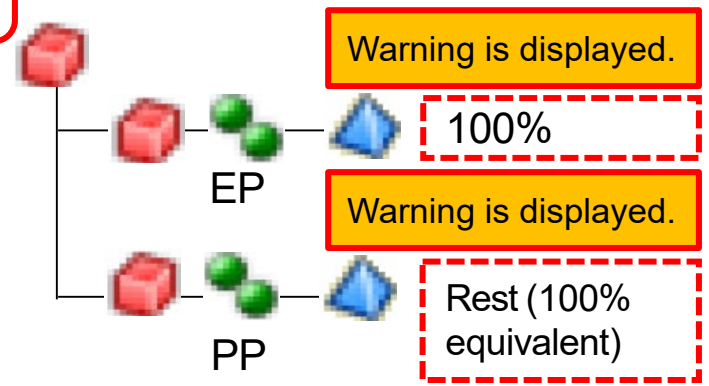
[Note] Report in the status without this warning!

(4) When a component of resin and rubber material is a single compound to give a 100% content rate

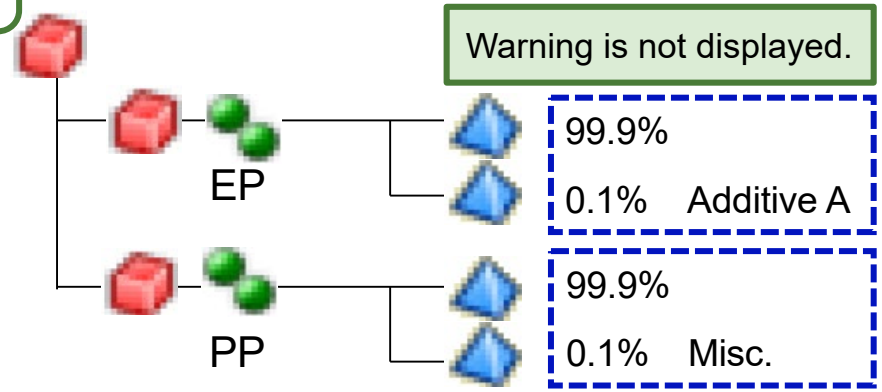
[Checking in IMDS: When a Material Data Sheet in which the material is classified in 5.x or 6.x, and composed of 100% of a single chemical is newly created Created] Refer to (IMDS User's Manual 3.3.17 Check Procedure)

- For a material with material classification, "5.x or 6.x", when the content rate of one substance is 100%, warming is displayed.
  (Confirm other additives and add them to the data to prevent omission of additives for resins and rubbers.)

With warning



Without warning



[Note] Report in the status without this warning!

(5) Chromate, water in passive state

[Checking in IMDS: When a material includes more than 1% of liquid or gaseous chemical substance and its material classification is not "9.x", or includes more than 1% of a specified chemical substance]

Refer to (IMDS User's Manual 3.3.17 Check Procedure)

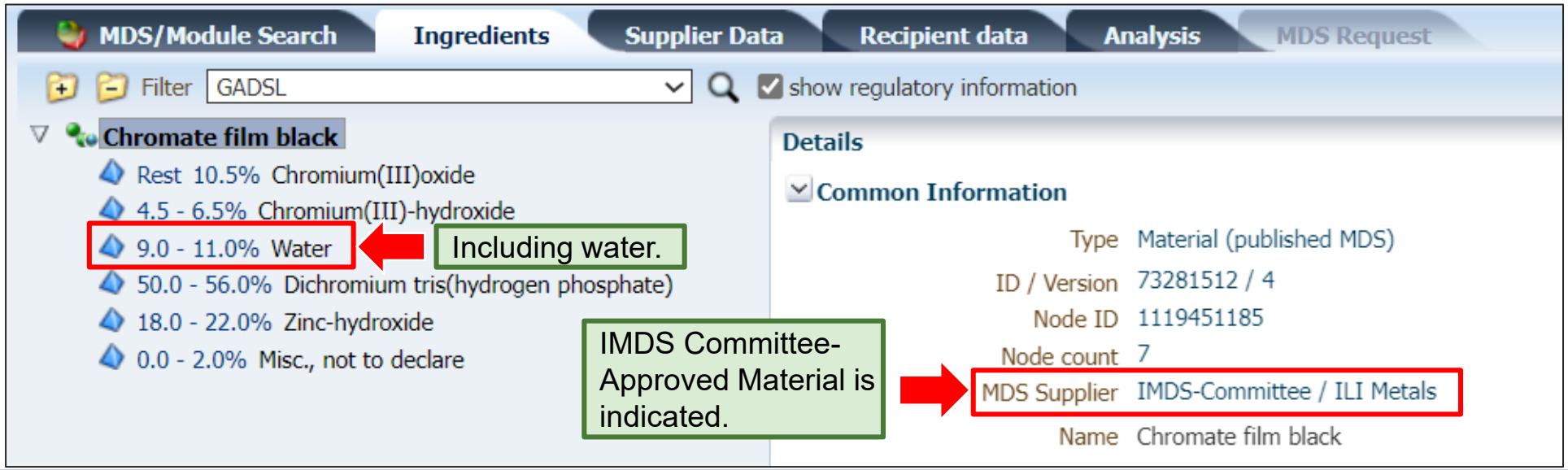
- If the state with water in chromate is right, even if the warning is displayed, report as it is.

The report will not be refused basically even if water is included.

[For your reference]

- The chromate (black) with water included is registered among IMDS Committee-Approved Materials data.

[IMDS published MDS IMDS ID (Material): 73281512 / 4]



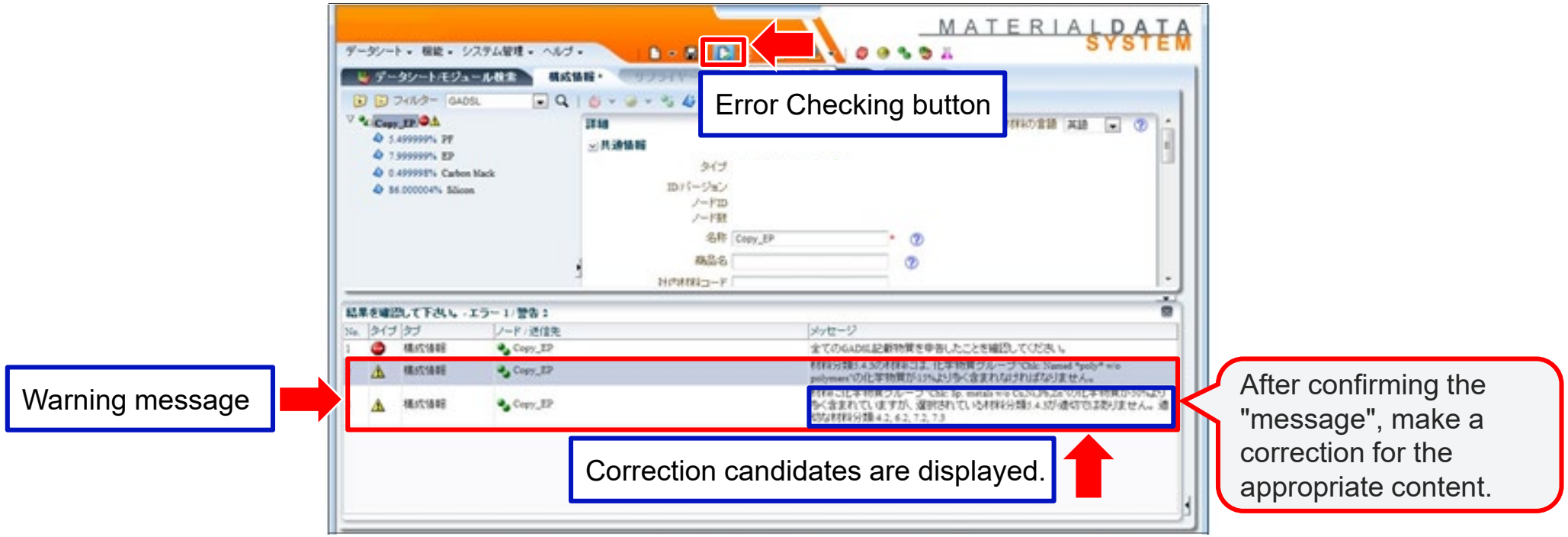
(6) Material classification

[Checking in IMDS: When a material includes more than a specified content rate of a specified chemical substance]

Refer to (IMDS User's Manual 3.3.17 Check Procedure)

- When the warning is displayed by the IMDS Error Checking, confirm the correction candidate indicated on the message field to select the appropriate material classification.

* Even though the warning is displayed, the material classification may be correct (the appropriate option may not be displayed).



Japan Display Inc.

JDI

6 Points for preparing Substance Research Data

6-1 Always report substances listed on GADSL
6-2 Report substances as in final products
6-3 Report in line with the latest design change and material change
6-4 Pass Substance Research Data across the supply chain
6-5 Report every homogeneous material separately
6-6 Report indications with or without Material Properties Indication
6-7 Report Parts Masses correctly
6-8 How to input glass components
6-9 Input a material name in the name field of the Material Data

6-1 Always report substances listed on GADSL

When a substance includes a substance listed on GADSL exceeding the threshold value, entry is mandatory. For highly-confidential substances and confidential substances, the content rate is allowed up to 10%.

Refer to (IMDS Recommendation 001 Rule 3.2.1.D, Rule 4.5.2.C, Rule 4.5.3)

[Points to particularly pay attention to]

(1) When data is created (creating new, updating)

(I) Substances listed on GADSL

- When a substance exceeds the prescribed threshold value, always report that.
- Using a wild card (Highly Confidential Substance, Misc., not to declare and others) for non-disclosure is unavailable.

(II) Wild card (non-disclosure)

- When a wild card is used, comply with "IMDS Recommendation 001 Rule 4.5.3".

* Note that the content rate combining a Highly Confidential Substance with a Confidential Substance shall not exceed 10% in IMDS.

(2) When the data update is necessary (when GADSL is revised)

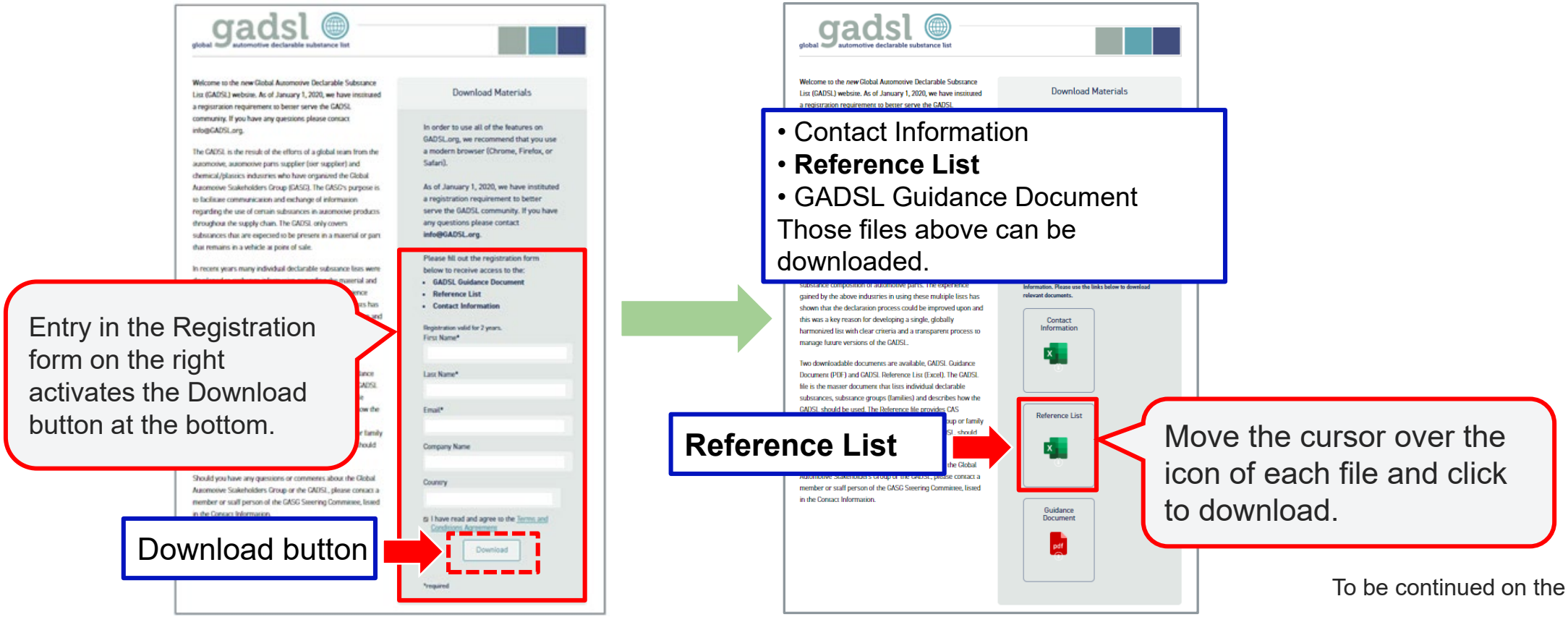
- When your substance has been listed on GADSL after using a wild card, promptly let us know it.

[How to check the up-to-date GADSL]

Confirm the list on the link below.

http://www.gadsl.org/

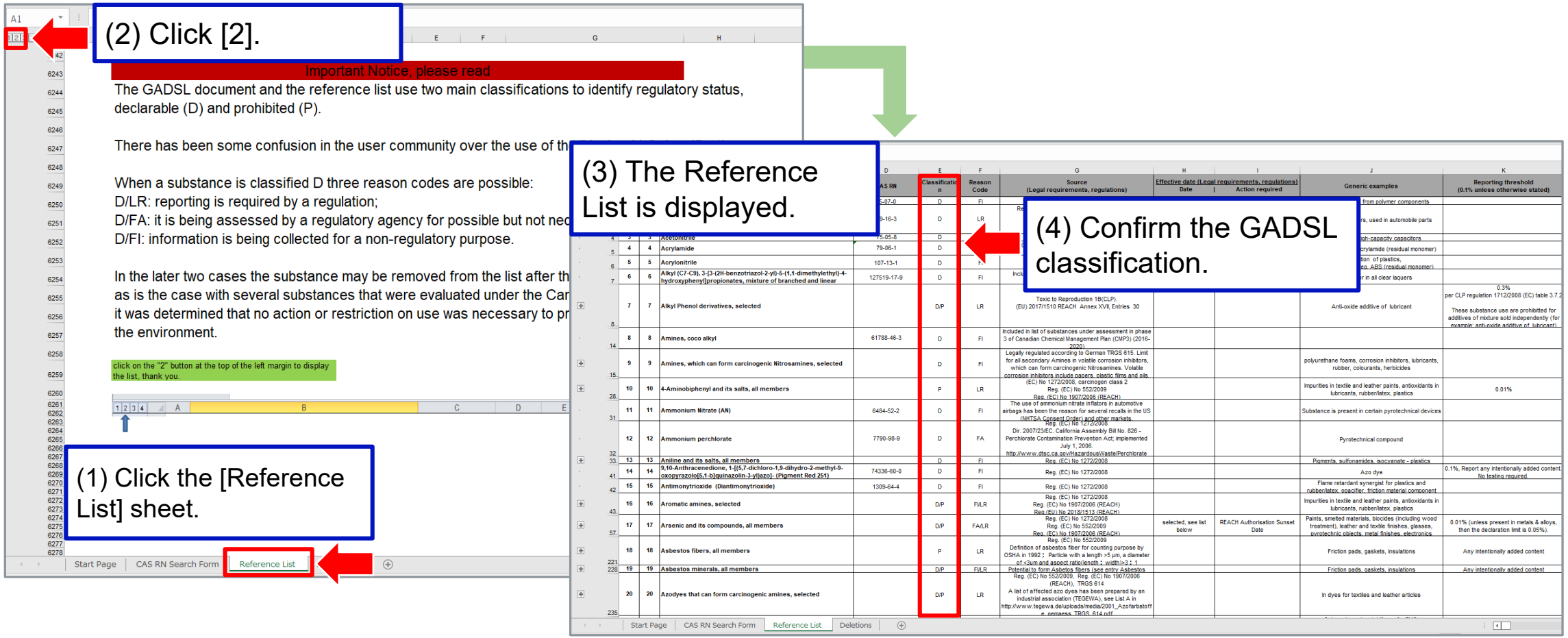
Downloading the files, "Contact Information", "**Reference List**" and "GADSL Guidance Document", is available.



To be continued on the next page

6 Points for preparing Substance Research Data

Open the excel file of [Reference List] downloaded to confirm the GADSL classification as follows.



6-2 Report substances as in final products

Enter the substance finally included in the product.

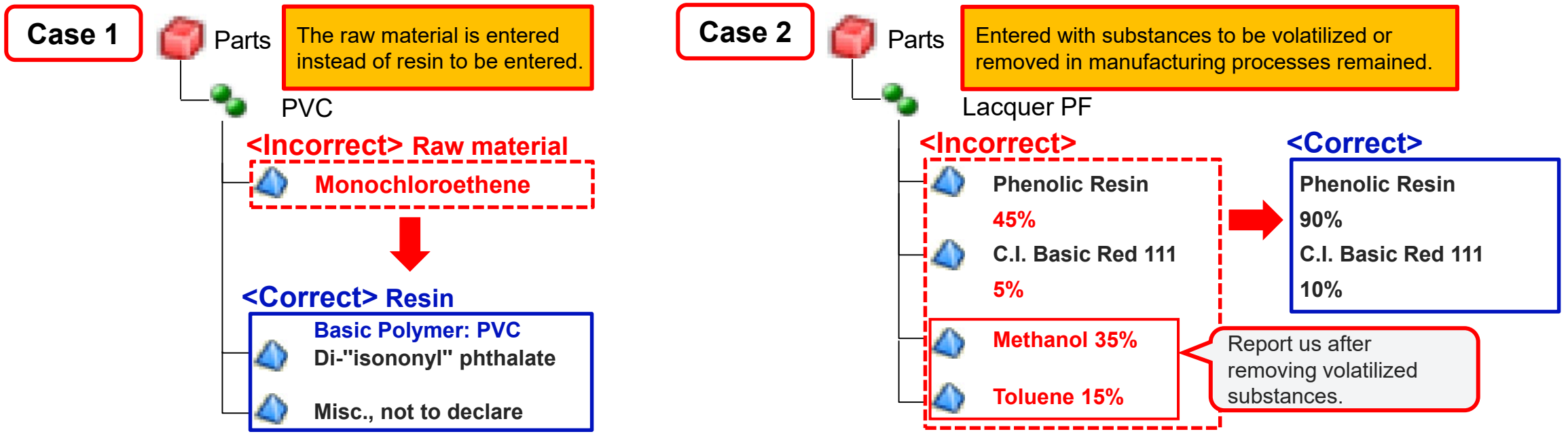
Refer to (IMDS Recommendation 001 Rule 4.4.1.B, Rule 4.4.1.C)

[Points to particularly pay attention to]

(1) As for resins, report the product state (component) delivered to us instead of raw materials used for manufacturing resins.

(2) As for coating materials and adhesives, report the state after curing, excluding substances (process chemicals) to be volatilized or removed in manufacturing processes.

(3) As for polarizers and tapes etc., report the state excluding protective film, marking ink and separator.



For your reference: Options for resins (Basic Substance)

- Report the final product state delivered to us instead of raw materials.
- As for resins, since the options (Basic Substance) are available below, use them for confirmation to material manufacturers or other objectives.
- The list below describes one of examples of compounds for resins. Many options such as other resins and polymer alloys (resins with several resins mixed) that are not defined in JIS are registered to use.

Material Name (Japanese)	Material Code (JISK6899-1)	Options in IMDS (Compound Name)
Acrylonitrile--butadiene-acrylic ester 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-acrylic ester 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 formaldehyderesin	CF	Basic Polymer: CF
Carboxy methyl 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 acidplastic	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 epoxy plastic	EP	Basic Polymer: EP
Ethylene-propylene plastic	E/P	Basic Polymer: E/P
Ethylene-tetrafluoroethyleneplastic	ETFE	Basic Polymer: ETFE

Material Name (Japanese)	Material Code (JISK6899-1)	Options in IMDS (Compound Name)
Methyl methacrylate-butadiene-styrene plastic	MBS	Basic Polymer: MBS
Methyl cellulose	MC	Basic Polymer: MC
Melamine-formaldehyde resin	MF	Basic Polymer: MF
Melamine-phenolic resin	MP	Basic Polymer: MP
α-Methyl styrene-acrylonitrile plastic	MSAN	Basic Polymer: MSAN
Polyamide	PA	Basic Polymer: PA
Polyaryl ether ketone	PAEK	Basic Polymer: PAEK
Polyamide imide	PAI	Basic Polymer: PAI
Polyacrylate	PAK	Basic Polymer: PAK
Polyacrylonitrile	PAN	Basic Polymer: PAN
Polyacrylate	PAR	Basic Polymer: PAR
Polyaryl amide	PARA	Basic Polymer: PARA
Polybutene	PB	Basic Polymer: PB
Polybutyl acrylate	PBAK	Basic Polymer: PBAK
1,2-Polybutadiene	PBD	Basic Polymer: PBD
Polybutylene terephthalate	PBT	Basic Polymer: PBT
Polycarbonate	PC	Basic Polymer: PC
Polycyclohexylenedimethylene-terephthalate	PCT	Basic Polymer: PCT
Polychlorotrifluoroethylene	PCTFE	Basic Polymer: PCTFE
Polydiallylphthalate	PDAP	Basic Polymer: PDAP
Polydicyclopentadiene	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

To be continued on the next page

6 Points for preparing Substance Research Data

Following the previous page

Material Name (Japanese)	Material Code (JISK6899-1)	Option in IMDS (Compound Name)
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
Polyether ester	PEEST	Basic Polymer: PEEST
Polyether imide	PEI	Basic Polymer: PEI
Polyether ketone	PEK	Basic Polymer: PEK
Polyethylene naphthalate	PEN	Basic polymer: PEN
Polyethylene oxide	PEOX	Basic Polymer: PEOX
Polyester urethane	PESTUR	Basic Polymer: PESTUR
Polyether sulfone	PESU	Basic Polymer: PES
Polyethylene terephthalate	PET	Basic Polymer: PET
Polyether urethane	PEUR	Basic Polymer: PEUR
Phenol-formaldehyde resin	PF	Phenol-formaldehyde Resin
Perfluoro alkoxyalkane resin	PFA	Basic Polymer: PFA
Polyimide	PI	Polyimide
Polyisobutylene	PIB	Basic Polymer: PIB
Polyisocyanurate	PIR	Basic Polymer: PIR
Polyketone	PK	Basic Polymer: PK
Polymethacryl imide	PMI	Basic Polymer: PMI
Polymethylmethacrylate	PMMA	Basic Polymer: PMMA
Poly(N-methylmethacrylimide)	PMMI	Basic Polymer: PMMI
Poly(4-methylpenta-1-ene)	PMP	Basic Polymer: PMP
Poly(α-methyl styrene)	PMS	Basic Polymer: PMS
Polyoxymethylene, polyacetal, polyformaldehyde	POM	Basic Polymer: POM
Polypropylene	PP	Basic Polymer: PP
Polyprolylene, foamed	PP-E	Basic Polymer: PP-E
Polyphenylene ether	PPE	Basic Polymer: PPE
Polypropylene oxide	PPOX	Basic Polymer: PPOX
Polyphenylene sulfide	PPS	Basic Polymer: PPS
Polyphenylene sulfone	PPSU	Basic Polymer: PPSU
Polystyrene	PS	Basic Polymer: PS
Polystyrene, foamed	PS-E	Basic Polymer: PS-E
Polystyrene, impact-resistant	PS-HI	PS-HI (HIPS)

Material Name (Japanese)	Material Code (JISK6899-1)	Option in IMDS (Compound Name)
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, ultrahigh molecular weight	PE-UHMW	Basic polymer: PE-UHMW
Polyester carbonate	PEC	Basic Polymer: PEC
Polyether ether ketone	PEEK	Basic Polymer: PEEK
Polysulfone	PSU	Basic Polymer: PSU
Polytetrafluoro ethylene	PTFE	Basic polymer: PTFE
Polytrimethylene terephthalate	PTT	Basic Polymer: PTT
Polyurethane	PUR	Basic Polymer: PUR
Polyvinyl acetate	PVAC	Basic Polymer: PVAC
Polyvinyl alcohol	PVAL	basic Polymer: PVAL
Polyvinyl butyral	PVB	Basic Polymer: PVB
Polyvinyl chloride	PVC	Basic Polymer: PVC
Polyvinyl chloride, chlorinated	PVC-C	Basic Polymer: PVC-C
Polyvinylidene chloride	PVDC	Basic Polymer: PVDC
Polyvinylidene fluoride	PVDF	Basic Polymer: PVDF
Polyvinyl fluoride	PVF	Basic Polymer: PVF
Polyvinyl 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-methyl styrene plastic	SMS	Basic Polymer: SMS
Urea-formaldehyde resin	UF	Basic Polymer: UF
Unsaturated polyester	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

For your reference: How to input epoxy resins

[Rule]
- Description in cured state is needed for resins used for adhesives and sealants.
- When a chemical substance under the cured state to declare is included in the product, declaration (reporting) of the substance is necessary. Refer to (IMDS Recommendation 001a)

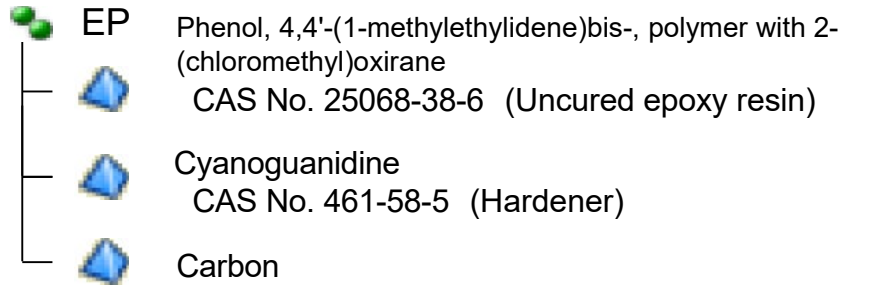
[Recommendation]
- It is recommended to use basic substances such as Basic Duromer: Epoxy resin (without CAS No.) for cured epoxy resins other than chemical substances to declare. Refer to (IMDS Recommendation 012)

[Points on input]

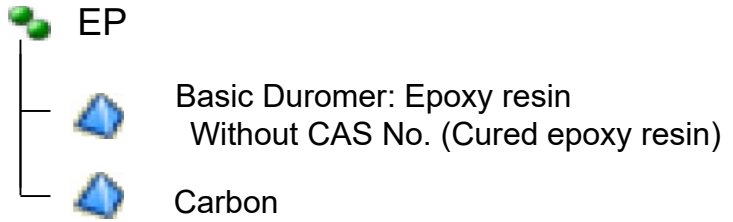
- When both uncured resins and hardeners are input, input* both for basic substances together.
- Unless hardeners are coexistent with uncured resins, input* uncured resins as basic substances.
  * If cured epoxy resins are also entered in the data received from suppliers, uncured resins and hardeners may be unreacted. Always ensure that suppliers state whether unreacted substances remain or not and their content rates. If the unreacted substance remains, correction is unnecessary.
- When an unreacted resin is a brominated substance, select Basic Duromer: Brominated epoxy resin for a basic substance. (Refer to the next page. Select the most appropriate basic substance.)

Case

<Incorrect> (The unreacted substances are reported)



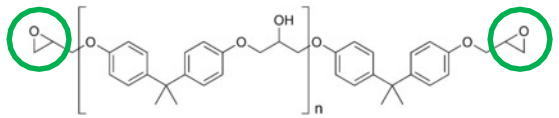
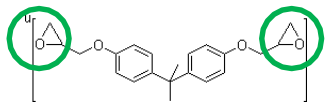
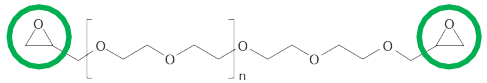
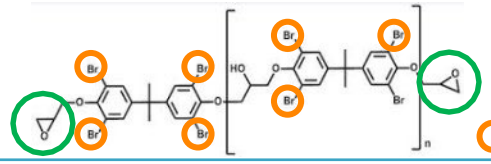
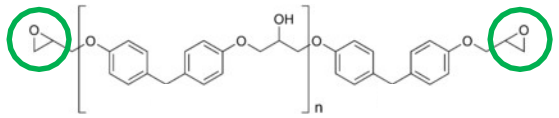
<Correct> (The correct example with completely cured substances)



6 Points for preparing Substance Research Data

How to deal with states before and after the curing in the diagrams below. While an unreacted epoxy resin may be cured itself, a substance with the two epoxy groups (functional group with oxygen included) in one molecular cannot cure itself as below, resulting in the state without geometrically cross-linked* structure to be uncured.

* Even if this uncured resin may be solidified itself because of a large molecular weight, the product is thermoplastic (linear aggregate) but unable to cure (form a network structure).

<Uncured resin>	<Cured resin>
CAS No. 25068-38-6 	Without CAS No. Basic duromer: Epoxy resin
CAS No. 25085-99-8 	Without CAS No. Basic duromer: Epoxy resin
CAS No. 25928-94-3 	Without CAS No. Basic duromer: Epoxy resin
CAS No. 40039-93-8 	Without CAS No. Basic duromer: **Brominated** epoxy resin
CAS No. 58421-55-9 	Without CAS No. Basic duromer: Epoxy resin

[Reaction intermediates of epoxy resins and urethan resins]

One of examples of reaction intermediates of epoxy resins and urethan resins are shown in Table A and B below. Report those substances by using basic substances and other measures after confirming states of final products.

<Table A> Reaction intermediates of epoxy resins

CAS No.	Chemical Name
25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane
58421-55-9	Phenol, methylenebis-, polymer with (chloromethyl)oxirane (9CI)
25928-94-3	Diethylene-glycol,-polymer-with-1-chloro-2,3-epoxypropane
40039-93-8	Phenol, 4,4'-(1-methylethylidene)bis(2,6-dibromo-, polymer with (chl...
25085-99-8	Oxirane, 2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bi...
25036-25-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bis(oxirane)
29690-82-2	Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol
28064-14-4	Phenol, polymer with formaldehyde, glycidyl ether

<Table B> Reaction intermediates of urethan resins

CAS No.	Chemical Name
9009-54-5	Polyurethane
9016-87-9	Diphenylmethanediisocyanate, isomeres and homologues
68400-67-9	1,3-Butanediol, polymer with alpha-butyl-omega-hydroxypoly (oxy(methyl-1,2-ethanediyl)) and 1,3-diisocyanatomethylbenzene
101325-00-2	Carbonic acid, dimethyl ester, polymer with 1,6-hexanediol
282534-15-0	Dimethyl carbonate polymer with 1,6-hexanediol and 2-oxepanone
171926-76-4	Polycarbonatediol (PCD)
216691-97-3	Carbonic acid, dimethyl ester, polymer with 1,4-cyclohexanedimethanol and 1,6-hexanediol
103837-45-2	1,2-Propanediol, polymer with 1,1'-methylenebis[isocyanatobenzene], methyloxirane and oxirane
113066-13-0	Urethane acrylate prepolymer
9057-91-4	Poly(oxy(methyl-1,2-ethanediyl)), alpha-hydro-omega-hydroxy-, polymer with 1,3-diisocyanatomethylbenzene
68083-75-0	1,2-Propanediol, polymer with 1,1'-methylenebis(4-isocyanatobenzene), 2-methyloxirane and oxirane
68092-58-0	Propanol, ((1-methyl-1,2-ethanediyl)bis(oxy))bis-, polymer with 1,1'...

Those CAS No.s are removed after reactions. Select appropriate substances that resins include after chemical reactions. For example, select "Without CAS No. Epoxy resin", "Without CAS No. Polyurethane resin or PUR" or others.

6-3 Report in line with the latest design change and material change

When a new material is added or a material already reported is removed from a part, revise the corresponding data sheet and send it.
Refer to (IMDS Recommendation 001 Rule 3.2.1.B)

[Points to particularly pay attention to]

- If Substance Research Data are changed due to the design change and changing and addling of materials or other reasons, re-submission is necessary.

  Example of change: Coating layer one layer ⇒ change to coating layer two layers
  Example of change: Product with lead included ⇒ change to lead-free product

6-4 Pass Substance Research Data across the supply chain

Pass Material Data across the supply chain (Tier n ⇒ Tier n-1 ⇒ ⋯ Automobile manufacturers) The Material data Sheet shall be created by material-producing companies only.
Refer to (IMDS Recommendation 001 Rule 3.1.A, Rule 4.4.1.E)

[Points to particularly pay attention to]

- Material manufacturers are advised to input material component information.
- Parts manufacturers are advised to use Material Data received from material manufacturers to create parts data.

6-5 Report per homogeneous material separately

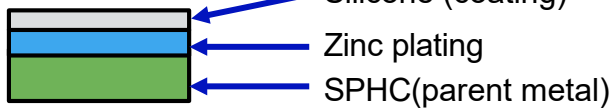
Enter separately per homogeneous material.
Refer to (IMDS Recommendation 001 Rue 4.4.1.D, 001a 1.1 Select the material classification in IMDS)

[Points to particularly pay attention to]

- "Homogeneity" of a homogeneous material means a homogeneous material composition that can never be simply separated into several materials.

  Make sure that the material is described as the homogeneous material.

Case



<Incorrect>

- Parts
  - Galvanized steel plate
    - Carbon
    - Manganese
    - Iron
    - Zinc(metal)
    - Misc., not to declare
    - Polydimethyl-siloxane

<Correct>

- Parts
  - SPHC (parent metal)
    - Carbon
    - Manganese
    - Iron
  - Zinc plating
    - Zinc (metal)
    - Misc., not to declare
  - Silicone coating
    - Polydimethyl-siloxane

6-6 Report indications with or without Material Properties Indication

A case corresponding to the following conditions requires a response with Material Properties Indication.
Reference value: "Material Classification 5.1.x or 5.4.x" and "Exceeding 100g", "Material Classification 5.2 or 5.3" and "Exceeding 200g“
Refer to (IMDS User’s Manual 3.3.11 Polymeric Parts Marking)

[Points to particularly pay attention to]

- Since "N (No)" means that the Material Properties Indication is not provided even through the material indication is necessary, avoid making "N (No)" response, because that is unusual.

  *When the mass is not more than the reference value and the Material Properties Indication is not provided, make a "N/A (not applicable)" response.

- The response for Material Properties Indication is necessary if component parts in ASSY items purchased meet conditions of material classification and masses.

6-7 Report Parts Masses correctly

Correct masses (Parts Masses) need to be specified.
Refer to (IMDS Recommendation 001 Rule 4.2.2.A)

[Points to particularly pay attention to]

- Referring to confirming masses in the drawings and the actual measurement, report correct masses.

6-8 How to input glass components

[Recommendation]

- Regarding newly-created data sheets for glass, silicate ceramics and enamels, description of simple materials including a single (basic) chemical substance is necessary. If it is unable to change the data, the existing data is continuously available.
- A material with a chemical substance to declare included need to be additionally specified according to the general rule of the "IMDS Recommendation 001".

Refer to (IMDS Recommendation 001a 2.6 MDS creation for glass, silicate ceramic and enamel)

[Points on input]

- When new data is created, use UVCB* only.

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

Case

<Incorrect>

- Galvanized steel plate
  - SiO_2
  - PbO

<Correct>

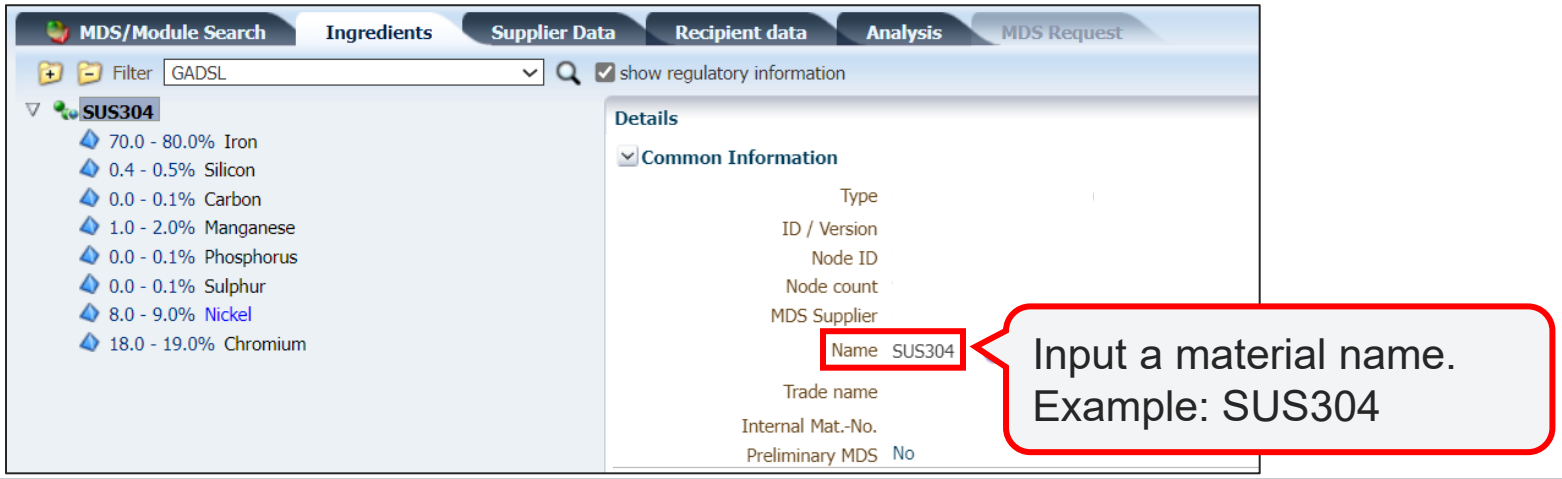
- Glass
  - Glass without declarable substances (*One of UVCB)
  - Pb
    - When a new entry is reported, enter a chemical substance to declare, only Pb, separately.
    - Refrain from entering the raw material "PbO".

6-9 Input a material name in the name field of the Material Data

- Input a material name in the name field of the Material Data Sheet.
  Refer to (IMDS Recommendation 001 Rule 4.4.2 Information Given in Material MDSs)
- Avoid using a commercial name for the material name. Refer to (IMDS Recommendation 001 Rule 4.4.2.B)

【Points to particularly pay attention to】

- When a name is provided by official material standards (such as JIS and ISO), always enter the official name.
  If the name above is unable to use, input as follows.
  (1) The material can be specified and the specified name can be provided
  (Example : Carbon steel, Stainless steel, etc.)
  (2) Material Marks and Codes registered on the JAPIA sheets
  (Example : such as FE, AL, SINTERFE, ABS, PC)



To be continued on the next page

6-9 Input a material name in the name field of the Material Data

When the material name is input below, it is insufficient. Input the right name. (Our customers may reject it)

Insufficient case	Main cases	Example of insufficient input (underlined in red)
The name other than the material is input.	The name of component parts is input.	FINISHING
		CENTER TAPE
	The commercial name is input.	XYZ-001
Though the material name is input, the other name is also input.	The name of component parts is input.	SHEET PC
		EP_RIGHT SIDE
	The commercial name is input.	INK_ABC-002

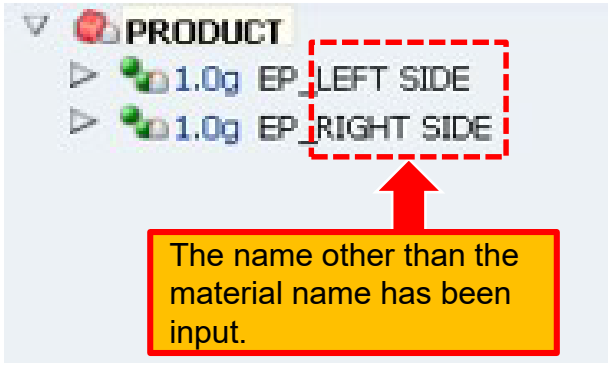
To be continued on the next page

6-9 Input a material name in the name field of the Material Data

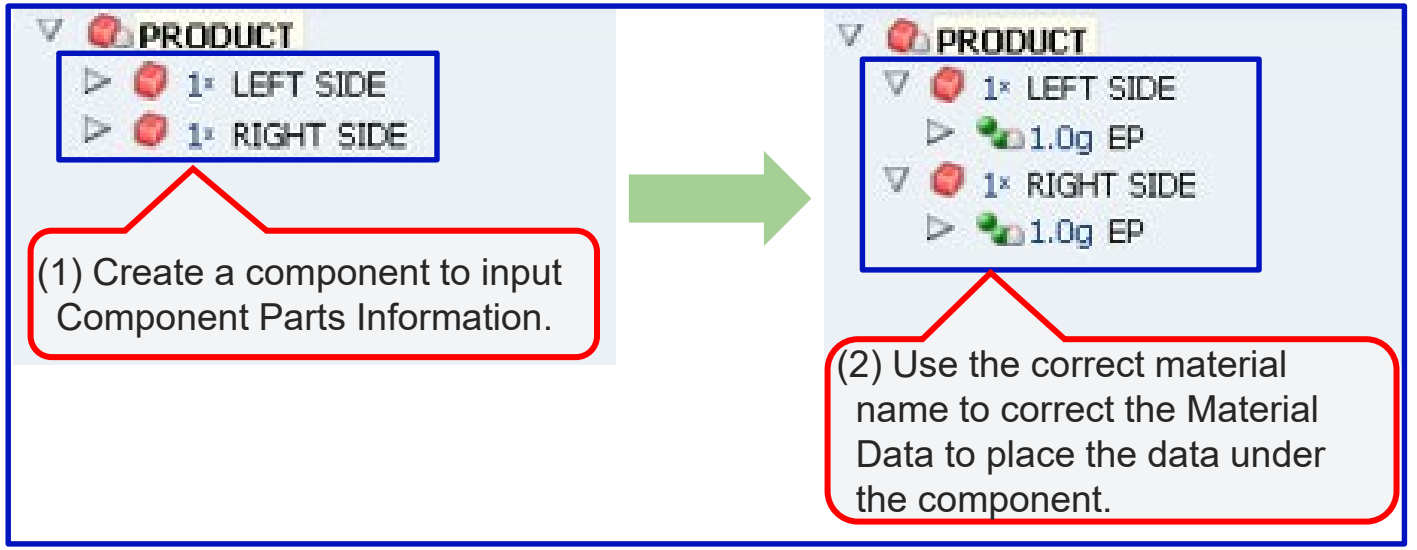
How to enter a location where a material is used (Component Parts Information) is indicated below. For differentiating the identical materials in the component, this measure can be used.

How to deal with errors

<Incorrect>



<Correct>



6-10 Report as material or semi-component for MDS Type, as for components whose delivered unit and JDI usage unit are different

As for components such as color filters that are delivered in large plates and separated into individual parts at JDI, report as material or semi-component for MDS Type as per unit area/volume/length.

Refer to (IMDS User's Manual 3.3.1 MDS Types)

3.3 Materials and Component MDSs

3.3.1 MDS Types

The following table describes and helps differentiate Components, Semi-Components and Materials:

MDS Type	Description	Can be attached to	Can have child nodes	Has weight field
Material 	Represents a homogeneous structure – if a slice were taken through the item, there would be no layers or visible differentiation (exception for electronic components).	Materials, Semi-Components, Components	Material, Substance	No
Semi-Component 	Similar to a material, this represents a structure that will require further processing before it is assembled and given a final weight. Examples are a steel blank or a coated wire. Usage is by length, by volume, or by area.	Semi-Components, Components	Semi-Component, Material	No
Component 	Used to represent an assembly or component with a defined weight and used in whole number quantities. Examples include a bolt, an engine block, a seat, etc. The weight of a Component MDS is defined at creation and cannot be reduced in the structure.	Components	Component, Semi-Component, Material	Yes

Quoted from (IMDS User's Manual 3.3.1 MDS Types)

Japan Display Inc.
JDI

7 Contacts

Please access the contact point for inquiries as follows regarding IMDS such as How to operate the system/Registration/How to input/How to create data/Training/Manual/Rules/How to carry out settings.

[IMDS Service Center]

- Japan

  E-mail: jpimds-helpdesk@dxc.com

  TEL: 03-4530-9270

- Other countries than Japan

  Refer to the link in the following.

  https://public.mdsystem.com/ja/web/imds-public-pages/imds-service-centers

For inquiries in regard to JDI Specific Requirements, contact the following point.

Japan Display Inc. Product Environment Department Green Procurement Help Desk

E-mail: green.proc.zz@j-display.com

Revision history

Ver.	Date of revision	Key revision points
1.00	Feb. 9, 2023	Newly created
1.01	Sep. 13, 2023	Revised “4-6 Application Code” and “4-8 Recyclate Information.” Newly created “6-10 Report as material or semi-component for MDS Type, as for components whose delivered unit and JDI usage unit are different.“

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