

For suppliers

CAMDS Data Entry Manual

NIDEC MOBILITY CORPORATION
Quality Planning Department,
Quality Management Division,

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1. Introduction

This manual describes how to fill in CAMDS datasheets for the parts and materials supplied to **NIDEC MOBILITY CORPORATION** and affiliate companies¹ (hereinafter referred to as “Nidec Mobility”). Create CAMDS MDSs that are submitted to Nidec Mobility according to this manual.

For items not provided in this manual, please follow “CAMDS User’s Manual”² or “CAMDS Application Guidance”³ issued by CAMDS Management Center (CATRC).

List of CAMDS Application Guidance

No	Title (Chinese)	Title
CAMDS 01	总则	General Provisions
CAMDS 02	汽车用涂镀层和表面转化膜填报指南	Guidance for Creating MDS of Metallic Coatings and Conversion Coatings for Automobile
CAMDS 03	油漆涂层填报指南	Guidance for Creating Non-metallic Coatings MDS
CAMDS 04	塑料填报指南	Guidance for Creating Plastics MDS
CAMDS 05	橡胶和热塑性弹性体材料填报指南	Guidance for Creating MDS of Rubber and Thermoplastic Elastomer
CAMDS 06	纤维制品填报指南	Guidance for Creating Fiber Products MDS
CAMDS 07	皮革填报指南	Guidance for Creating Leather MDS
CAMDS 08	汽车密封及胶粘剂产品填报指南	Guidance for Creating Adhesives and Sealants MDS
CAMDS 09	润滑油填报指南	Guidance for Creating Lubricants MDS
CAMDS 10	电子电器元件填报指南	Guidance for Creating Electronic Components MDS
CAMDS 11	汽车照明系统零部件填报指南	Guidance for Creating MDS for Components in Automobile Lighting System
CAMDS 12	汽车玻璃零部件填报指南	Guidance for Creating MDS for Automobile Glass Components
CAMDS 13	热系统零部件填报指南	Guidance for Creating MDS of Components in Heat Exchange System
CAMDS 14	汽车转向系统零部件填报指南	Guidance for Creating MDS for Components in Automobile Steering System
CAMDS 15	机油滤清器填报指南	Guidance for Creating Oil Filter MDS
CAMDS 16	变更管理指南	Guidance of Modification to MDS

Notes *****

¹ List of affiliate companies

Company name	Country
NIDEC MOBILITY (Guangzhou) CORPORATION	China
NIDEC MOBILITY (DALIAN) CORPORATION	China
NIDEC MOBILITY (THAILAND) Co., Ltd.	Thailand
NIDEC MOBILITY AMERICA CORPORATION	U.S.A
NIDEC MOBILITY CANADA CORPORATION	Canada
NIDEC MOBILITY MEXICO S. de R.L.de C.V.	Mexico

² An operation manual of CAMDS issued by CAMDS Management Center. For the latest version, visit the CAMDS website (<http://www.camds.org.cn>), then switch the language of the homepage to English with 'English' tab from the upper right of the screen, 'Download'→ 'Download Brochure'→'CAMDS user manual [JP]' or '1CAMDS user manual V10.0-EN'.

³ A document issued by CAMDS Management Center. For the latest version, visit the CAMDS website (<http://www.camds.org.cn>), then switch the language of the homepage to English with 'English' tab from the upper right of the screen, 'Download'→ 'Download Brochure'→'CAMDS Application Guidance-V2.0-EN'.

2. Outline of CAMDS (China Automotive Material Data System)

2.1 What is CAMDS?

CAMDS is an automotive material data management system of China, to manage recycling, reuse and prohibited/restricted substances information of the materials used in automotive products.

Information of all materials used in automobiles can be managed by component and material manufacturers creating datasheets (MDS (Material Data Sheet)/Module: e-forms with component and material information) through CAMDS.

For details, see the CAMDS website (<http://www.camds.org.cn>).

It is possible to use CAMDS for free, but an account registration is needed beforehand.

For the account registration, contact the persons listed in section 6.

3. Data creation for CAMDS

3.1 Requirements

CAMDS should be created comply with table 2, if now the date will be rejected.





Table2 Requirements regarding the registration of CAMDS data

No.	Requirements
1	Create datasheets without warning message.
2	Do not enter the following confidential information: Marker name, maker model, material class, etc.
3	A polymer material (classification 5.x) shall have at least two substances attached to it. (Prohibit reporting one substance content of 100%)
4	As for materials not described in any public standards, but classified to "classification 1.x" or "classification 3.1, 3.2", enter either "Not Applicable" or "N/A" into Std. Mat. No.
5	When using the material datasheets that are disclosed by CAMDS Management Center, please use the latest version.

3.2 CAMDS Data Structures

A CAMDS datasheet is built up as a tree structure following a hierarchical parent/child relationship by “Element” in the following table 3. Each element is displayed with its own icon.

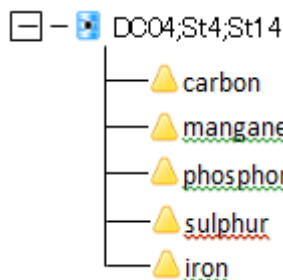
Table3 Types of elements and the descriptions

Element	Description	Sub-element
Component (Icon: )	A delivering part or a child part. Enter quantity.	<ul style="list-style-type: none"> • Other components • Semi-components • Materials
Semi-component (Icon: )	A semi-finished product, which will go through further process steps to be a part. Enter weight per unit such as Kg/m ² .	<ul style="list-style-type: none"> • Other semi-components • Materials
Material (Icon: )	A material that constitute a part. Enter weight (g or mg).	<ul style="list-style-type: none"> • Basic Substances • Other materials (only apply to polymer materials)
Basic substance (Icon: )	A bottom element in a datasheet and a part of a material. Select the substances registered in CAMDS and enter content (%).	<ul style="list-style-type: none"> • None

3.2.1 Valid Data Structures

(1) Creating/submitting a material datasheet

- Tree structure: Material – Basic substances
- Object: raw materials (example: resin pellet)

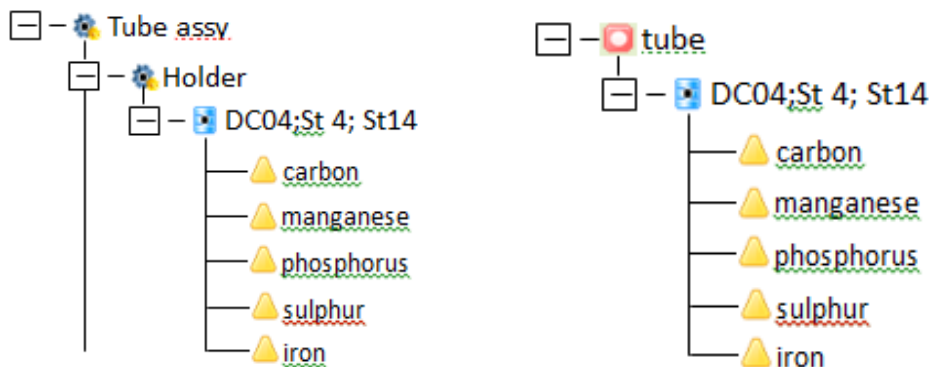


(2) Creating/submitting a component datasheet

- Tree structure: Part – Child parts (1~n) – Materials – Basic substances
- Object: Parts and products

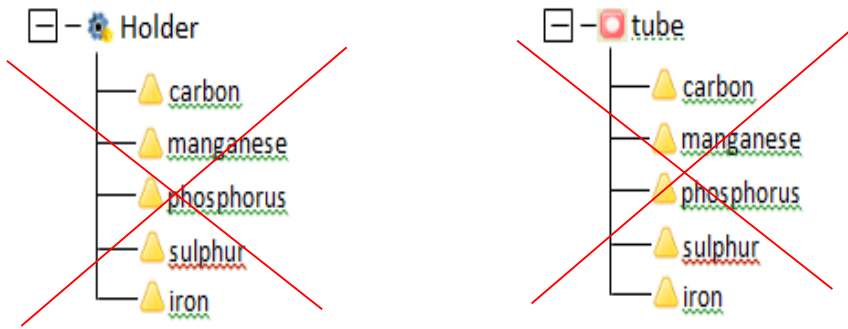
There is no limited number of components, but create tree structures according to actual parts structure.

Regarding semi-finished product (such as wires, coating etc.) datasheets, create tree structures according to [Semi-components – Materials – Basic substances].

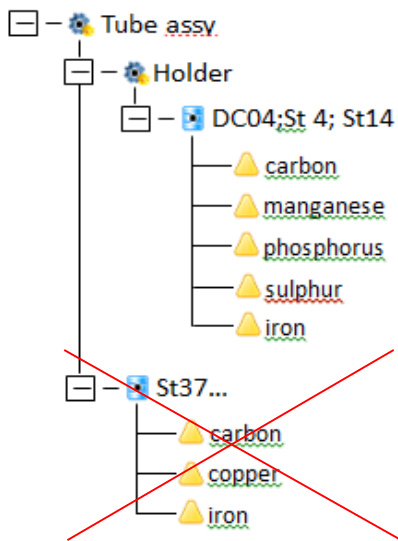


3.2.2 Invalid Data Structures

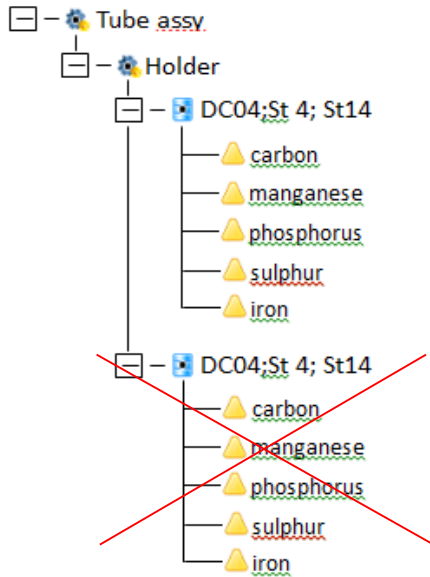
(1) Basic substances cannot be added directly under a component or a semi-component.



(2) Different icons cannot be placed in the same structure level.



(3) Data with the same CAMDS ID cannot be placed in the same structure level.



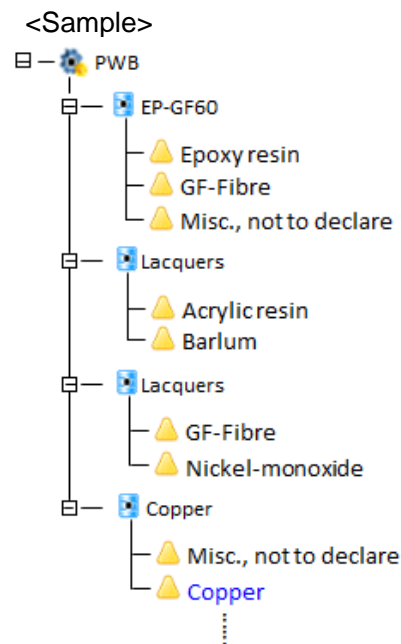
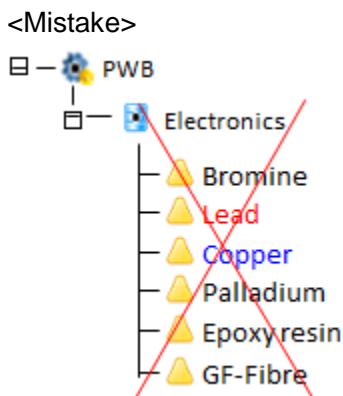
3.2.3 Flat BOM (FBOM) reporting method

In the CAMDS, in order to simplify material reporting structures, it is allowed to combine substances into groups. It is called 'Flat BOM (FBOM) reporting method'. This method is allowed solely in case of creating complex wiring harnesses and printed circuit boards data. Because Nidec Mobility products are not applicable, please DO NOT create datasheets with this method. In addition, datasheets created with this method will be rejected.

□ Example : PWB datasheet structural

Wrong: Group all basic substances to classification 8 Electronics/electrics.

Correct: Create datasheet with homogenous materials.



3.3 Data creation for CAMDS

3.3.1 Selection of material classification

Select the field “Classification” according to main substance, characteristic or application.

Table4 Classification field of CAMDS : Cannot be used or can be used with conditions

No.	Classification(EN)	Classification(CN)	Remarks
0	undefined	未定义	Cannot be used
1	Steel and iron materials	钢铁材料	Cannot be used
1.1	Steels/cast steel/sintered steel	钢/铸钢/烧结刚	Use only when Classification 1.1.1 or 1.1.2 does not apply. Usually, do not use this classification
1.1.1	Unalloyed, low alloyed	非合金钢（碳钢）、低合金钢	
1.1.2	Highly alloyed	高合金钢	
1.2	Cast iron	铸铁	Use only when Classification 1.2.1, 1.2.2 or 1.2.3 does not apply. Usually, do not use this classification
1.2.1	Cast iron with lamellar graphite/tempered cast iron	灰口铸铁	
1.2.2	Cast iron with nodular graphite/vermicular cast iron	球墨铸铁	
1.2.3	Highly alloyed cast iron	高合金铸铁	
2	Light alloys, cast and wrought alloys	轻合金、铸造/变形合金	Cannot be used
2.1	Aluminum and aluminum alloys	铝及铝合金	Use only when Classification 2.1.1 or 2.1.2 does not apply. Usually, do not use this classification
2.1.1	Cast aluminum alloys	铸造铝合金	
2.1.2	Wrought aluminum alloys	变形铝合金	
2.2	Magnesium and magnesium alloys	镁及镁合金	Use only when Classification 2.2.1 or 2.2.2 does not apply. Usually, do not use this classification
2.2.1	Cast magnesium alloys	铸造镁合金	
2.2.2	Wrought magnesium alloys	变形铝合金	
2.3	Titanium and titanium alloys	钛及钛合金	
3	Heavy metals, cast and wrought alloys	重金属、铸造/变形合金	Cannot be used
3.1	Copper(e.g. copper amounts in cable harnesses)	铜（线束）	
3.2	Copper alloys	铜合金	
3.3	Zinc alloys	锌合金	
3.4	Nickel alloys	镍合金	
3.5	Lead	铅	
4	Special metals	特种金属	Cannot be used
4.1	Platinum/rhodium	铂/铑	
4.2	Other special metals	其他特种金属	
5	Polymer materials	聚合物材料	Cannot be used
5.1	Thermoplastics	热塑性塑料	Cannot be used
5.1a	filled Thermoplastics	填充热塑性塑料	Use for thermoplastics and fillings defined in ISO 1043

No.	Classification(EN)	Classification(CN)	Remarks
5.1b	unfilled Thermoplastics	非填充热塑性塑料	Use for thermoplastics defined in ISO1043
5.2	Thermoplastic elastomers	热塑性弹性塑料	Use for thermoplastic elastomers defined in ISO 18064
5.3	Elastomers/elastomeric compounds	橡胶/弹性化合物	Use for thermoplastics elastomers defined in ISO 1629
5.4	Duromers	热固性塑料	Use only when Classification 5.4.1, 5.4.2 or 5.4.3 does not apply. Usually, do not use this classification
5.4.1	Polyurethane	聚氨酯	
5.4.2	Unsaturated polyester	不饱和聚酯	
5.4.3	Other duromers	其他热固性塑料	
5.5	Polymeric compounds(e.g. inseparable laminated trim parts)	聚合物混合物 (不能分离层压部件)	Cannot be used
5.5.1	Plastics(in polymeric compounds)	塑料	Do not use this classification because Nidec Mobility products do not use this material
5.5.2	Textiles(in polymeric compounds)	织物 (纤维、纱线、织物及针织物等)	
6	Process polymers	其他聚合物	Cannot be used
6.1	Lacquers	涂料	
6.2	Adhesives, sealants	胶粘、密封剂	
6.3	Underseal	防腐涂层	
7	Other materials and material compounds(scope of mixture)	其他材料及混合/化合物	Cannot be used
7.1	Modified organic natural material(e.g. leather, wood, cardboard)	改性有机天然材料 (皮革、木材、纸板等)	
7.2	Ceramics/glass	陶瓷/玻璃	
7.3	Other compounds (e.g. friction linings)	其他混合物 (刹车车片)	
8	Electronics/electrics	电子/电器设备	Cannot be used
8.1	Electrics (e.g. pc boards, displays)	电子设备 (电子主板、显示器等)	Cannot be used
8.2	Electrics	电器设备	Cannot be used
9	Fuels and auxiliary means	燃料及其他液体	Cannot be used
9.1	Fuels	燃料	
9.2	Lubricants	润滑剂	
9.3	Brake fluid	刹车液	
9.4	Coolant/other glycols	冷却液/其他甘醇类	
9.5	Refrigerant	冷媒	
9.6	Washing water,battery acids	洗涤液、电池酸液	
9.7	Preservative	防腐剂	
9.8	Other fuels and auxiliary means	其它燃料及润滑剂	Use only when Classification 7.3 does not apply. Usually, do not use this classification

3.3.2 Creating Material Datasheet

Many MDSs of metallic material that is defined in a public standard are published by CAMDS Management Committee.

When your datasheet is same as a published MDS, use the published MDS to report.

For materials without a published MDS, create datasheet according to the instructions below. (Refer to Fig.1.)

No	Entry Field	Necessity	Instructions
A-1	Material Name ⁴	Mandatory	<ul style="list-style-type: none"> For materials that are defined in a public standards, enter code/symbol described in the public standard entered in A-7 "Norms/Standards". For materials that are not defined in a public standard (or details unknown), enter a descriptive name. <p>Note: Do not enter part name. (Example: For epoxy resin, enter "EP". Do not enter "CASE" or "COVER".)</p>
A-2	Name(Foreign)	Unnecessary	—
A-3	Material No	Optional	<ul style="list-style-type: none"> Enter the number or symbol used internally to identified the material by supplier. Enter "-" when there is no material number. Do not enter catalog No.
A-4	Trade Name	Unnecessary	—
A-5	Material Classification	Mandatory	Refer to 3.3.1
A-6	Material Code/Symbol	Mandatory / Unnecessary	<p>For materials that are defined in a public standard, this entry is mandatory. For materials that are not defined in a public standard, no need to enter. For materials belong to classification 1~4 and 5.X that are not defined in a public standard, enter "N/A". No need to enter when the material belongs to oher classification.</p> <p>Note1. If you enter information in A-6, the entry of A-7 "Norms/Standards" is mandatory. Note2. For materials that are thermoplastics (ISO1043), thermoplastic elastomers (ISO18064), and elastomers (ISO1629), this entry is mandatory. (Example: For epoxy resin, enter "EP".)</p>
A-7	Norms/Standards	Mandatory / Unnecessary	<p>For materials that are defined in a public standard, this entry is mandatory. For materials that are not defined in a public standard, no need to enter. Note: If you enter information in A-6, this entry is mandatory.</p>

Notes *****

⁴ Refer to the entry example of the material name described in "CAMDS Application Guidance-01 General Provisions".

No	Entry Field	Necessity	Instructions
A-8	Test Report №	Unnecessary	—
A-9	Remark	Optional	Enter remarks only related to materials.
A-10	recyclate	Mandatory	Select 'yes' or 'no' about whether the material contains recyclate or not.
A-11	Content of post-industrial/pre-consumer recyclate	Mandatory / Unnecessary	Enter the industrial recycle content when 'yes' is selected in A-10. Do not enter anything when 'no' is selected in A-10.
A-12	Content of post consumer recyclate	Mandatory / Unnecessary	Enter the consumer recycle content when 'yes' is selected in A-10. Do not enter anything when 'no' is selected in A-10.
A-13	Sample ⁵	Unnecessary	Do not tick this check box.

Notes *****

⁵ Do not check "Sample" for all inputs below.

Ingredients

GADSL

EP-GF30

Details **VOC**

Type Material Sample **A-13**

ID / Version CA_8_31194025/ 0.01

Supplier NIDEC MOBILITY (GUANGZHO) EN

Material Name * EP-GF30 **A-1**

Name(Foreign) **A-2**

Material No. **A-3**

Trade name **A-4**

Material classification * filled Thermoplastics **MOD** **A-5**

Material code/Symbol EP-GF30 **MOD** **A-6**

Norms/Standards **A-7**

Test Report No. **A-8**

Remark **A-9**

Creation date 2022-09-08 10:40:02

Check date

Release date

recycle Does the material contain the recycled reference ISO 14021 **A-10**

Content of post-industrial/pre-consumer recycle From To **A-11**

Content of post consumer recycle From To **A-12**

Fig.1 Material Datasheet

3.3.3 Add Basic Substance

Add basic substances according to the following rules. (Refer to Fig.2.)

- Only basic substances contained in the final components and materials are to be added.
- The total of all basic substances in a material must be 100%.
- Substances that are listed in GADSL⁶ or are SVHC⁷ must be reported.
- Only substances that are: not listed in GADSL, not SVHC, and the sum is not exceed 10% of a material, may be replaced by a joker/ wildcard⁸.

No	Entry Field	Necessity	Instructions
B-1	Confidential	Optional	Only substances that are: not listed in GADSL, not a SVHC may be ticked ⁹
B-2	Proportion	Mandatory	Select from “Fixed,” “From-To ¹⁰ ,” or “Rest”, then enter proportion

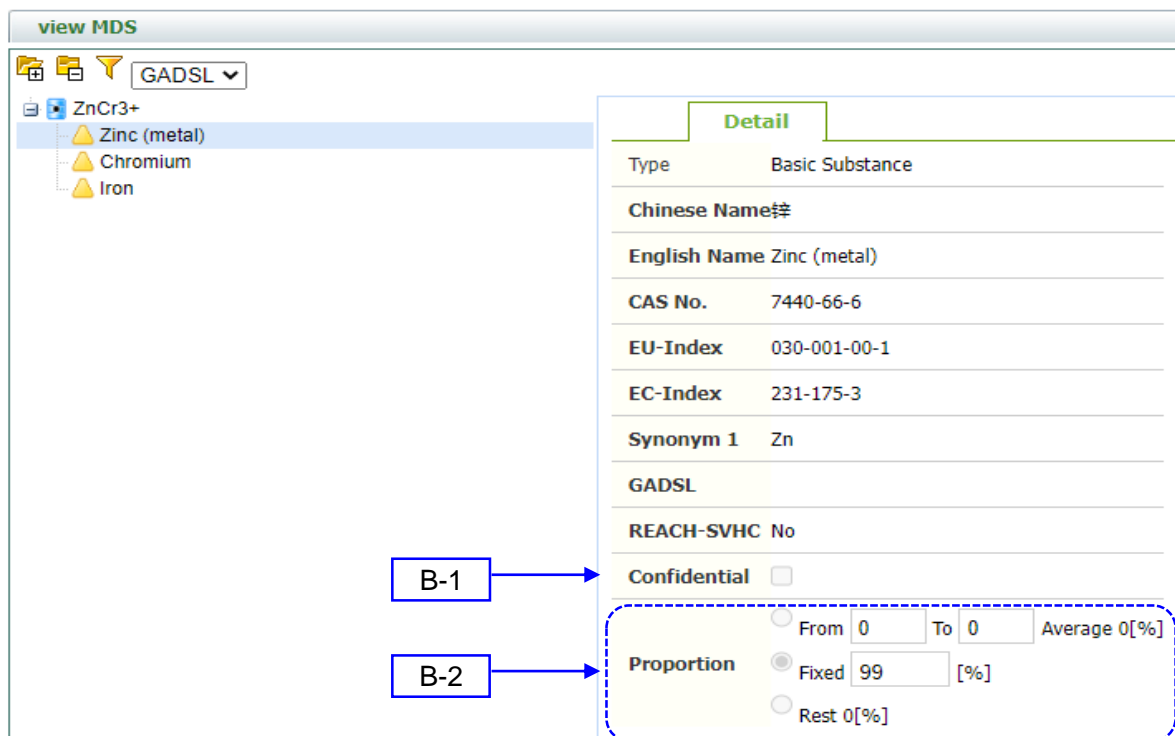


Fig.2 Basic Substance

Notes *****

- ⁶ The abbreviation for Global Automotive Declarable Substance List, it is a declarable/prohibited substances list use in automotive industry. For details, visit website of <http://www.gadsl.org>.
- ⁷ The abbreviation for Substance of Very High Concern listed in EU REACH Regulation.
- ⁸ Use a Joker/wildcard according to “CAMDS Application Guidance-01 General Provisions”.
- ⁹ The sum of Jokers/Wildcards and Confidential Substances cannot exceed 10% of a material.
- ¹⁰ Portion (percentage) range (X = minimum value, Y = maximum value)

Proportion of X	Proportion range
0≤X≤7.5	Y - X ≤3
7.5<X≤20	Y - X ≤5
20<X≤100	Y - X ≤10

3.4 Creating Semi-component Datasheet

Create semi-component datasheet according to the instructions below. (Refer to Fig.3.)

No	Entry Field	Necessity	Instructions
C-1	Article Name	Mandatory	Enter Nidec Mobility part name If there is no part name specified by Nidec Mobility, enter an arbitrary name.
C-2	Article Name(Foreign)	Unnecessary	—
C-3	Semi-component No.	Optional	Enter Nidec Mobility part number. If there is no part number specified by Nidec Mobility, enter an arbitrary number.
C-4	Specific weight	Mandatory	Select the relevant details from 'length', 'area' and 'volume', and enter specific weight for kg/m, kg/m2 or kg/m3.
C-5	Remark	Optional	Enter remarks only related to semi-component.

The screenshot shows the 'Ingredients' application window. The main area displays a 'Details' form for a semi-component. The form fields are as follows:

- Type: Semicomponent (with a 'Sample' checkbox)
- ID / Version: CA_7_5963052/ 0.01
- Supplier: NIDEC MOBILITY (GU) EN
- Article Name *: Semicomponent_CA_7 (labeled C-1)
- Article Name(Foreign): (empty) (labeled C-2)
- Semicomponent No.: (empty) (labeled C-3)
- Creation date: 2022-09-08 11:59:00
- Check date: (empty)
- Release date: (empty)
- Specific weight: (empty) (labeled C-4)
- Remark: (empty) (labeled C-5)

At the bottom of the form, there are three buttons: 'Tree Search', 'Save', and 'Next'.

Fig.3 Semi-component Datasheet

3.4.1 Adding Sub-elements

Add sub-semi-components or sub-materials under a semi-component according to the instructions below. (Refer to Fig.4 and 5)

No	Entry Field	Necessity	Instructions
D-1	Proportion (Material)	Mandatory	Select from “Fixed”, “From-To ¹¹ ”, or “Rest”, then enter proportion
D-2	Proportion (Semi-component)	Mandatory	Select from “Fixed”, “From-To ¹² ”, or “Rest”, then enter proportion

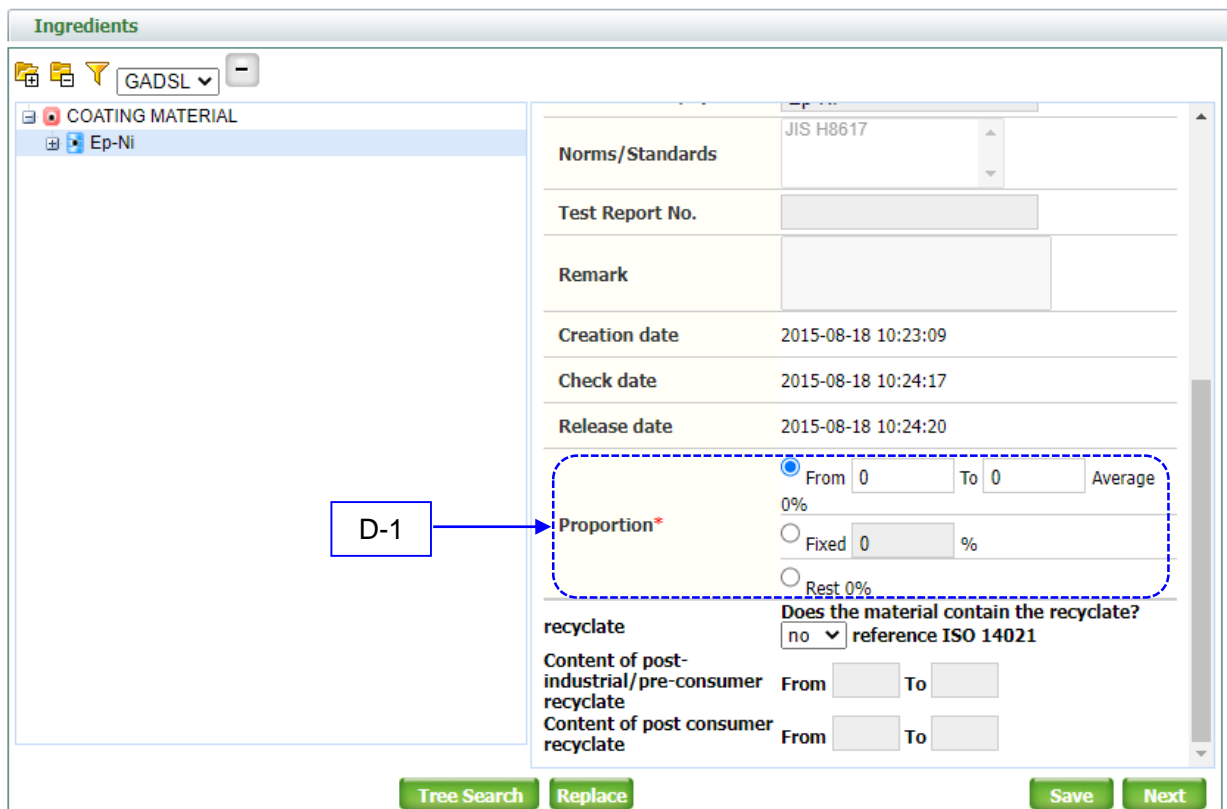


Fig.4 Add Sub-elements (Portion of

Notes *****

¹¹ Portion (percentage) ranges (X = minimum value, Y = maximum value)

Portion of X	Portion range
$0 \leq X \leq 100$	$Y - X \leq 20$

¹² Portion (percentage) ranges (X = minimum value, Y = maximum value)

Portion of X	Portion range
$0 \leq X \leq 100$	$Y - X \leq 20$

Ingredients

GADSL

COATING MATERIAL

MATERIAL, NON-F BRASS

Details

Type Semicomponent Sample

ID / Version CA_7_505264/ 1

Supplier NIDEC MOBILITY (GU) EN

Article Name * MATERIAL, NON-F BR

Article Name(Foreign)

Semicomponent No. 2199584-8

Creation date 2015-01-15 10:51:39

Check date 2015-01-30 11:02:43

Release date 2015-01-15 12:16:11

Specific weight

Proportion* From 0 To 0 Average 0%

Fixed 0 %

Rest 0%

Remark

Tree Search Replace Save Next

Fig.5 Add Sub-elements (Portion of semi-components)

3.5 Creating Component Datasheet

Create component datasheet according to the instructions below. (Refer to Fig.6.)

No	Entry Field	Necessity	Instructions
E-1	Article Name	Mandatory	Enter Nidec Mobility part name. If there is no part name specified by Nidec Mobility, enter an arbitrary name
E-2	Article Name(Foreign)	Unnecessary	-
E-3	Component Type	Optional	Enter component type if necessary.
E-4	Component No.	Mandatory	Enter Nidec Mobility part number. Note: For sub-components without an Nidec Mobility part number, enter an arbitrary number or code (ex. serial No.)
E-5	Measured quality per Item	Mandatory	Enter weight per item of drawing or measure. Select "g" for weight unit.
E-6	Deviation	—	The difference between E-5 "Measured Weight per item" and "Calculated weight per item." This value is calculated automatically through the CAMDS system. The value must not exceed $\pm 5\%$ or less.
E-7	Remark	Optional	Enter remarks only related to component.

The screenshot shows the 'view MDS' interface with a tree view on the left containing 'BASE COMP', 'BASE ASSY', and 'G8HL-1A4T-HW'. The main area displays a 'Detail' form for a component. The fields and their values are as follows:

- Type: Component (Sample checkbox is unchecked)
- ID / Version: CA_5_1186940/ 3
- The number of node: 183
- Supplier: NIDEC MOBILITY (GU) (EN dropdown)
- Article Name: BASE COMP (labeled E-1)
- Article Name(Foreign): (empty) (labeled E-2)
- Component Type: (empty) (labeled E-3)
- Component No.: 1133217-4 (labeled E-4)
- Measured Mass per Item: 119.40152 (labeled E-5)
- Calculated Mass per Item: 119.40152 g
- Deviation: 0% (labeled E-6)
- Remark: (empty) (labeled E-7)

At the bottom of the interface, there are four buttons: 'Check', 'Tree Search', 'Search Result', and 'Next'.

Fig.6 Component Datasheet

3.5.1 Adding Sub-elements

Add sub-components, sub-semi-components, or sub-materials under a component according to the instructions below. (Refer to Fig.7, 8, and 9)

No	Entry Field	Necessity	Instructions
F-1	Quantity (Component)	Mandatory	Enter child part quantity
F-2	Mass (Semi-component)	Mandatory	Enter semi-component weight
F-3	Mass (Material)	Mandatory	Enter material weight

The screenshot displays the 'view MDS' application. On the left, a tree view shows the component hierarchy: BASE COMP, BASE ASSY, BASE, LEAD FRAME(A), LEAD FRAME(B), and G8HL-1A4T-HW. The main area on the right is a data entry form with the following fields and values:

- Supplier: NIDEC MOBILITY (GU | EN)
- Article Name: BASE ASSY
- Article Name(Foreign):
- Component Type:
- Component No.: 3077170-7
- Measured Mass per Item: 77.84 g
- Calculated Mass per Item: 77.84 g
- Deviation: 0%
- Remark:
- Creation date: 2014-01-10 15:45:37
- Check date: 2014-01-10 15:50:50
- Release date: 2014-01-10 15:48:24
- Quantity: 1

At the bottom of the form, there are buttons for 'Check', 'Tree Search', 'Search Result', and 'Next'. A blue arrow points from a box labeled 'F-1' to the 'Quantity' field.

Fig.7 Add Sub-elements (Component Quantity)

The screenshot shows the 'Ingredients' application window. On the left, a tree view shows 'CONNECTOR ASSY' expanded to 'Semicomponent_CA_7_5963517'. The main area is the 'Details' tab, which includes fields for 'Type' (Semicomponent), 'Article Name *' (Semicomponent_CA_7), 'Article Name(Foreign)', 'Semicomponent No.', 'Specific weight', 'Mass' (0 g), and 'Remark'. A red box highlights the 'Mass' field, with an arrow pointing to it from a label 'F-2'. At the bottom, there are buttons for 'Tree Search', 'Replace', 'To Module', 'Save', and 'Next'.

Fig.8 Add Sub-elements (Semi-component Mass)

The screenshot shows the 'Ingredients' application window. On the left, a tree view shows 'CONNECTOR ASSY' expanded to 'EP-GF30'. The main area is the 'Details' tab, which includes fields for 'Material classification *' (filled Thermoplastics), 'Material code/Symbol' (EP-GF30), 'Norms/Standards' (ISO 1043), 'Test Report No.', 'Remark', 'Creation date', 'Check date', 'Release date', 'Mass' (0 g), and 'recycle' (Does the material contain the recycle? no reference ISO 14021). A red box highlights the 'Mass' field, with an arrow pointing to it from a label 'F-3'. At the bottom, there are buttons for 'Tree Search', 'Replace', 'Save', and 'Next'.

Fig.9 Add Sub-elements (Material Mass)

3.5.2 Polymeric Part(s) Marking

Polymeric part(s) marked details must be reported when polymer materials (classification 5.x) are contained in a CAMDS datasheet. Enter data according to the instructions below. (Refer to Fig.10.)

No	Entry Field	Necessity	Instructions
G-1	Polymeric part(s) have been marked	Mandatory	Select "Yes" or "Not Applicable" Do not select "No"

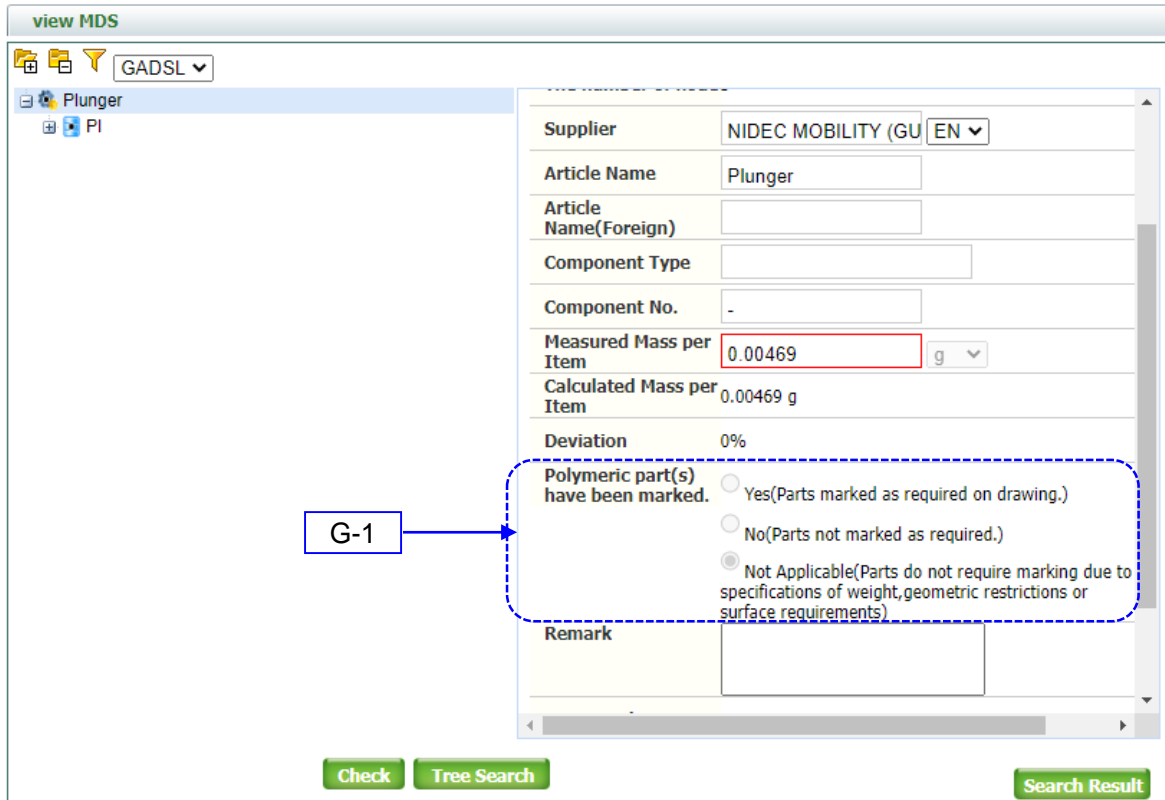


Fig.10 Polymeric Part(s) Marking

3.5.3 Application Code

(1) Selection

An application code must be selected when the material contains one of the substances of lead and its compounds, mercury, cadmium, hexavalent chromium and its compounds, nickel or PAHs (Polycyclic Aromatic Hydrocarbons).

However, do not select “Other application (potentially prohibited)”. Datasheet with this application code will be rejected by Nidec Mobility.

Enter data according to the instructions below. (Refer to Fig.11)

No	Entry Field	Necessity	Instructions
H-1	Application	Mandatory	Select the correct application code

The figure consists of three screenshots of the 'Ingredients' software interface, each showing the 'Application' tab for a material named 'DIE BONDING MATERIAL' under the category 'DIODE,ZENER'. The interface includes a tree view on the left with 'Silver', 'Tin', and 'Lead' listed. The main table has columns for 'Chinese Name ...', 'English Name ...', '%(MAX)', and 'Application'. In the first screenshot, the 'Application' field is 'none' and is highlighted with a blue dashed box and a blue arrow labeled 'H-1'. In the second screenshot, the 'Application' field is '(8e)-Lead in hi...' and is highlighted with a blue dashed box. In the third screenshot, the 'Application' field is 'Other applicati...' and is highlighted with a red dashed box. A red arrow points from a text box above that reads 'Do not select "Other application (potentially prohibited)"' to the 'Other applicati...' field.

Fig.11 Application Code

(2) Application codes of lead and its compoundsPlease extract application of lead from below table : Cannot be used

English	Chinese	Remark
Alloying element in steel for machining purposes or galvanised steel (Pb≤0.35%)	机械加工用钢材和镀锌钢(铅≤0.35%)	
1a. Steel for machining purposes and batch hot dip galvanised steel components containing up to 0.35% lead by weight	1a. 机械加工用钢材和批量热浸镀锌钢(铅≤0.35%)	
Aluminum (Pb≤0.4%)	铝材(铅≤0.4%)	
2(c)(i) - Alloying element in aluminum for machining purposes	2(c)(i)-用于加工目的的铝合金(铅≤0.4%)	
2(c)(ii) – Recycled aluminum alloy containing unintentionally added lead	2(c)(ii)-未包括2(c)(i)在内的铝合金(铅≤0.4%)	
Alloying element in copper (Pb≤4%)	铜合金(铅≤4%)	
Stabiliser in protective paints	防护漆稳定剂	Cannot be used
Solder in electronic circuit boards and other electric applications	电路板及其他电气部件的焊料	Cannot be used
(8a) - Lead in solder used in electronic circuit board applications	用于将电子、电气元器件焊接到电路板上所使用的含铅焊锡,以及除电解电容/铝电容之外元器件引脚上、电路板上为提高可焊性而附着的焊料	Cannot be used in new data
(8b) - Lead in solders in electrical application other than soldering on electronic circuit boards or on glass	除电路板或玻璃外其他电子产品中的焊料中的铅	Cannot be used in new data
(8c) - Lead in finishes on terminals of electrolyte aluminum capacitors	电解电容/铝电容引脚上的焊料	Cannot be used in new data
(8d) - Lead used in soldering on glass in mass airflow sensors	大气流传感器中玻璃上的含铅焊料	Cannot be used in new data
8(e) -Lead in high melting temperature type solders(i.e. lead-based alloys containing 85% by weight or more lead)	8(e).含铅高熔点焊料(也就是铅合金含铅量大于等于85%)	
8f(a) - Lead in compliant pin connector systems	顺压针连接器系统中的铅	
Lead in compliant pin connector systems other than the mating area of vehicle harness connectors-- 8f(b)	8f(b).除汽车线束连接器配套区以外的顺压针连接器系统中的铅	
8(g)(i) - Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	8(g)(i)-集成电路倒装芯片封装中内部半导体芯片和载体之间电气连接焊料中的铅	
8(g)(ii-i) - Lead in solders to complete a viable electrical connection between the semiconductor die and the carrier within integrated circuit flip chip packages where that electrical connection consists of a semiconductor technology node of 90 nm or larger	8(g)(ii-i)-集成电路倒装芯片封装中内部半导体芯片和载体之间电气连接焊料中的铅,其中电气连接为大于等于90纳米的半导体技术节点	
8(g)(ii-ii) - Lead in solders to complete a viable electrical connection between the semiconductor die and the carrier within	8(g)(ii-ii)-集成电路倒装芯片封装中内部半导体芯片和载体之间电气连接焊料中的铅,其中电气连接为任一半导体	

English	Chinese	Remark
integrated circuit flip chip packages where that electrical connection consists of a single die of 300 mm ² or larger in any semiconductor technology node	节点中大于等于300mm ² 的单一芯片	
8(g)(ii-iii) - Lead in solders to complete a viable electrical connection between the semiconductor die and the carrier within integrated circuit flip chip packages where that electrical connection consists of stacked die packages with dies of 300 mm ² or larger, or silicon interposers of 300 mm ² or larger	8(g)(ii-iii)-集成电路倒装芯片封装中内部半导体芯片和载体之间电气连接焊料中的铅,其中电气连接为含大于等于300mm ² 芯片的堆叠芯片封装,或大于等于300mm ² 的硅中介层	
(8h) - Lead in solders to attach heat spreaders to the heat sink in power semiconductor assemblies	功率半导体设备中焊接散热器与散热片的焊料	Cannot be used in new data
(8i) - Lead in solders in electrical glazing applications on glass except for soldering in laminated glazing	除夹层玻璃外其他电器上玻璃上的用的焊料中的铅	Cannot be used in new data
(8j) - Lead in solders for soldering of laminated glazing	8(j).夹层玻璃的焊锡	Cannot be used in new data
8(k) - Soldering of heating applications with 0,5A or more of heat current per related solder joint to single panes of laminated glazing not exceeding wall thickness of 2.1 mm. This exemption does not cover soldering to contacts embedded in the intermediate polymer	8(k)-焊接到每个相关焊点的热电流大于等于0.5A的加热应用,且焊点连接到壁厚不超过2.1毫米的层压玻璃的单面玻璃上,不包括焊接嵌入在中间聚合物中的触点	
Electrical components which contain lead in a glass or ceramic matrix compound except glass in bulbs and glaze of spark plugs	灯泡玻璃和火花塞釉层除外的具有含铅玻璃或陶瓷基复合材料的电气元件	Cannot be used
10(a) - Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound. This exemption does not cover the use of lead in: - glass in bulbs and glaze of spark plugs, - dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d)	10(a)-含铅的电气或电子元件应用在玻璃或者陶瓷材料,玻璃或陶瓷精细化合物,微晶玻璃材料,或者微晶玻璃精细化合物中。灯泡玻璃、火花塞釉层及10(b)、10(c)、10(d)中所列介电陶瓷材料除外	
10(b) - Lead in PZT based dielectric ceramic materials of capacitors being part of integrated circuits or discrete semiconductors	10(b)-以压电陶瓷为基础的介电陶瓷材料用铅应用在集成电路或半导体元件的电容器中	
10(c) - Lead in dielectric ceramic materials of capacitors with a rated voltage of less than 125V AC or 250V DC	10(c)-额定电压少于125伏交流电或者250伏直流电的电容器介电陶瓷材料中的铅	
10(d) - Lead in the dielectric ceramic	10(d)-电容器用介电陶瓷材料中,用于	

English	Chinese	Remark
materials of capacitors compensating the temperature-related deviations of sensors in ultrasonic sonar systems	补偿超声波声纳系统中传感器温差的铅	
Concentration within acceptable GADSL limits	在GADSL中可接受的浓度范围	
Other application (potentially prohibited)	其他应用 (潜在禁止)	Cannot be used

4. Recipient Data

Department name and Department ID of Nidec Mobility registered in CAMDS are listed below. Submit data to informed Department ID. (Refer to Fig.12)

Company name	CAMDS Department name	Department ID
NIDEC MOBILITY (Guangzhou) CORPORATION (China)	NIDEC MOBILITY (GUANGZHOU) CORPORATION	CA_3_16401
NIDEC MOBILITY (DALIAN) CORPORATION (China)	NIDEC MOBILITY (DALIAN) CORPORATION	CA_3_121869
NIDEC MOBILITY CORPORATION (Japan)	NIDEC MOBILITY CORPORATION(Japan)	CA_3_16527
NIDEC MOBILITY (THAILAND) Co., Ltd. (Thailand)	NIDEC MOBILITY (THAILAND) CO., LTD.	CA_3_36020
NIDEC MOBILITY CANADA CORPORATION (Canada)	NIDEC MOBILITY CANADA CORPORATION	CA_3_77393
NIDEC MOBILITY AMERICA CORPORATION (U.S.A)	NIDEC MOBILITY AMERICA CORPORATION	CA_3_77397
NIDEC MOBILITY MEXICO S. de R.L.de C.V. (Mexico)	NIDEC MOBILITY MEXICO S. de R.L. de C.V.	CA_3_77395

The screenshot shows the 'Add Recipient' interface with the following steps:

1. Click "Recipient data"
2. Click "Add recipients"
3. Select "Department"
4. Enter Department ID
5. Click "Search"
6. Select the target Department
7. Click "OK"

Fig.12 Add Recipient

4.1 Recipient Data for MDS Submission

Enter data in the “Enterprise information” field according to the instructions below. (Refer to Fig.13)

No	Entry Field	Necessity	Instructions
I-1	Supplier code	Optional	Enter supplier code
I-2	Designated Component No. by customer	Mandatory	Enter informed part number Example: 1234567-8 (Note: Do not include revision level of Nidec Mobility Part No. in this field.)
I-3	Designated Name by customer	Mandatory	Enter informed part name Note: Do not enter your own part name.
I-4	Drawing No	Unnecessary	—
I-5	Drawing date	Unnecessary	—
I-6	Drawing Change Level	Unnecessary	—
I-7	Report No	Mandatory	If the revision level exists, enter the revision level of Nidec Mobility Part No.
		Unnecessary	If the revision level doesn't exist, leave the column blank.
I-8	Report date	Mandatory	Enter the MDS submission date (YYYY/MM/DD).
I-9	Purchase order No	Unnecessary	—
I-10	Bill of delivery No	Unnecessary	—
I-11	Reason of denial	Unnecessary	—
I-12	Forwarding is allowed	Mandatory	Select “Yes”
I-13	Remark	Optional	You can enter remarks only related to parts.

Enterprise information	
Supplier code *	<input type="text"/> ← I-1
Designated Component No. by customer *	<input type="text"/> ← I-2
Designated Name by customer *	<input type="text"/> ← I-3
Drawing No.	<input type="text"/> ← I-4
Drawing date	<input type="text"/> [Year(four digits)-Month(two digits)-Day(two digits)] ← I-5
Drawing Change Level	<input type="text"/> ← I-6
Report No.	<input type="text"/> ← I-7
Report date	<input type="text"/> [Year(four digits)-Month(two digits)-Day(two digits)] ← I-8
Purchase order No.	<input type="text"/> ← I-9
Bill of delivery No.	<input type="text"/> ← I-10
Reason for denial:	<input type="text"/> ← I-11
Forwarding is allowed	<input checked="" type="radio"/> Yes <input type="radio"/> No ← I-12
Remark	<input type="text"/> ← I-13
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

Fig.13 Recipient Data

5. CAMDS Operation Procedures

5.1 New Creation and Update of MDS

MDS creation is classified into new MDS creation and existing MDS update (as a new version¹³) for parts/materials in different cases. Create MDS according to the instructions below.

Classification	Object parts and materials/Status
New MDS creation	New parts and materials
	Adopted parts and materials but there is no MDS report
	Parts and materials that are planned to be adopted
Existing MDS update (as a new version)	Parts have a change of weight or materials by a design change
	When existing MDS need to be updated due to revision of CAMDS Application Guidance or laws/regulations etc.
	When existing MDS has some incorrect descriptions

5.2 Workflow of MDS Data Creation

Below are the basic steps from CAMDS submission request to work completion.

(1) Request MDS submission

When parts or materials MDSs are needed, Nidec Mobility contact person will request MDS submission by e-mail with the following information:

Part No., part name, deadline, Department ID of data recipient, etc.

(2) Create/submit MDS

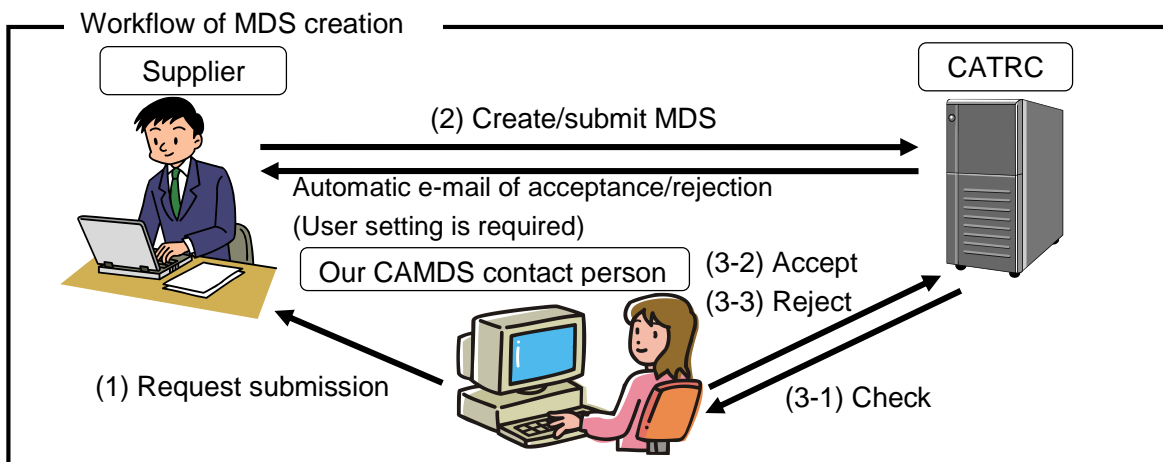
Suppliers should create and submit the MDS to Nidec Mobility by the deadline.

(3) Check MDS

(3-1) Nidec Mobility will check and judge submitted MDSs based on this manual.

(3-2) When MDS meets the requirements; Nidec Mobility will accept the MDS and the creation will be complete¹⁴.

(3-3) When MDS doesn't meet the requirements; Nidec Mobility will reject the MDS.



Notes *****

¹³ MDS can be updated by updating version numbers without changing CAMDS ID.

¹⁴ MDS status can be viewed in the tab of "recipient status".

5.3 Action for rejection

Rejection reason(s) will be informed from Nidec Mobility contact person by e-mail.

Supplier should correct the MDS according to the information¹⁵, and re-submit the corrected MDS to Nidec Mobility.

5.4 Workflow for creating MDS of part including Nidec Mobility-supplied part

The basic workflow for creating MDS of part including Nidec Mobility-supplied part is shown as below.

- (1) For submission request of part including Nidec Mobility-supplied part, Nidec Mobility contact person will request supplier (hereinafter referred to as “Company A”) with information of Part No. and Part Name including Nidec Mobility-supplied parts by e-mail.
- (2) Nidec Mobility will accept or create the Nidec Mobility-supplied part MDS, and then forward or submit it to Company A.
- (3) Company A should create the final part MDS including the MDSs of Nidec Mobility-supplied parts and the other child parts purchased by Company A, and then submit it to Nidec Mobility.

5.5 Workflow for creating MDS of part including Nidec Mobility-supplied material

The basic workflow for creating MDS of part including Nidec Mobility-supplied material is shown as below.

- (1) Supplier that uses Nidec Mobility-supplied materials (hereinafter referred to as “Company B”) should request Nidec Mobility to submit the Nidec Mobility-supplied material MDS.
- (2) Nidec Mobility will accept or create the Nidec Mobility-supplied material MDS, and then forward or submit it to Company B.
- (3) Company B should use the MDS submitted from Nidec Mobility to create the part MDS and then submit it to Nidec Mobility.

Notes *****

¹⁵ Refer to “CAMDS User’s Manual” for how to operate.

6. Contact

6.1 Contact of general concern about CAMDS

CAMDS Management Center	E-mail service@camds.org.cn	Phone number (+86) 18322561218
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6.2 Contact of Nidec Mobility

If you have any questions or concerns for this manual or Nidec Mobility CAMDS submission requests, please contact the contact persons listed below by e-mail or phone.

Department	E-mail	Telephone
NIDEC MOBILITY CORPORATION (Japan)		
Quality Planning Department	NMOJ-ML-RCS-request@nidec.com	(+81)568-78-6504
NIDEC MOBILITY (Guangzhou) CORPORATION (China)		
NIDEC MOBILITY (DALIAN) CORPORATION (China)		
Quality Management Dept.	NMOG-ML-IMDS@nidec.com	(+86)20-82075333-343
NIDEC MOBILITY (THAILAND) Co., Ltd. (Thailand)		
Quality Assurance Dept.	NMOT-ML-IMDS@nidec.com	(+66)35-227169-74
NIDEC MOBILITY AMERICA CORPORATION (U.S.A.)		
NIDEC MOBILITY CANADA CORPORATION (Canada)		
NIDEC MOBILITY MEXICO S. de R.L.de C.V. (Mexico)		
Engineering Dept.	NMOC-ML-IMDS@nidec.com	(+1)905-829-0143

Revision History

Rev	Released date	Item	History of Enactment / Revision (Reason and areas of revision)
A	2019/12/2	-	New Release
B	2021/01/08	Cover	Added cover
		Chapter 6.2	Change E-mail
C	2022/11/22	Chapter 1	Corrected company name; Added China(DALIAN) to the list of affiliated companies; Updated URL of CAMDS Chinese website and method of downloading documents
		Chapter 2.1	Updated URL of CAMDS Chinese website
		Chapter 3.3.1	Changed 5.1,8.1 and 8.2 classification in Table 4 to " Cannot be used "
		Chapter 3.3.2	Added notes of A-1,Changed necessity and instructions of A-3 and A-7,Added A-10 to A-13
		Chapter 3.4	Changed necessity of C-3,Added C-4 to C-5
		Chapter 3.5	Overall review and addition of No, entry field, necessity, instructions
		Chapter 3.5.3	Added Application ID
		Chapter 4	Added China(DALIAN) and company ID to the list of affiliated companies
		Chapter 4.1	Changed necessity and instructions of I-1,I-2,I-7
		Chapter 6.1	Changed E-mail and telephone
		Chapter 6.2	Added China(DALIAN),Changed department of China, Consolidation of department, e-mail and telephone for the U.S.A, Canada and Mexico
		ALL	Changed screen images to latest version