

Da Vinci Smart Manufacturing

BRD S04.01.03_Master Data_Material Maintenance_WIP

Version	Created/Modified by	Description	Date
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1. WIP List Screen	3
2. Add Material Details.....	6
Material Information Tab	6
Material Specification Tab.....	8
3. Edit Material Details.....	11
Material Information Tab	11
Material Specification Tab.....	13
4. View Material	16
Material Information Tab	17
Material Specification Tab.....	18

1. WIP List Screen

This is designed to provide a comprehensive and user-friendly interface for managing WIP, including both active and inactive materials. **This data is populated from an external system and are loaded initially in inactive state.** Users can filter, search, and sort materials based on various parameters like Material Type and Material Status.

Header Section

- **Title:** "MM : WIP"
- **Stats Section:** Total count of Active | Inactive
- **Search Bar:** Tooltip text: Search by Material ID / Material Name
- **Filters:**
 - Material Type -
 - Multi-select Dropdown
 - All Material Types related to WIP
 - Status -
 - Multiselect Dropdown:
 - Values: Active | Inactive
 - Clear Filter - This will clear all the applied filters
 - All Filter drop downs should be sorted alphabetically / numerically

WIP List Section

Users can view the list of all WIP , including both active and inactive materials. This data is populated from an external system and are loaded initially in inactive state. Users can filter, search, and sort materials based on various parameters like Material Type and Material Status. The table will have the following columns:

Table Default Sorting : Latest Modified first

- **Material ID:**
 - **Material ID**
 - Sorting: Yes
 - Frozen - Yes
- **Material Name:**
 - **Material Name corresponding to the Material ID**
 - Sorting: Yes
 - Frozen: No
- **Material Type:**
 - Material Type, the material ID belongs to
 - Sorting: Yes
 - Frozen: No
- **Date Created**
 - **Date Material was created as per ERP system**
 - Sorting: Yes

- Frozen: No
- **Status:** Indicates the status of the record
 - **Active** – WIP that are activated in the system.
 - **Inactive** - WIP imported from the ERP are initially marked as inactive or have been deactivated within the system.
 - Sorting: Yes
 - Frozen: No

Note: Horizontal scroll is required to be able to navigate through all columns and visualize all data but always respecting the frozen columns.

- **Action Buttons:** Depending on the status, allows users to edit or view the record. Only users with Create/Edit permissions on the module can activate, edit, or deactivate materials.
 - **Active:**
 - View – Record details can be viewed in non-editable mode
 - Edit - Details can be edited in the Material Information and Specification tab.
 - Deactivate - Users can deactivate an active material, which moves it to an inactive state. Deactivate the material after a confirmation message
 - “Do you want to deactivate this material “MAT ID”?”
 - **Inactive: Material Information tab details have not been saved**
 - View – Record details can be viewed in non-editable mode
 - Add Details – Additional details can be included in the Material Information and Specification tab.
 - **Inactive: Material Information tab details have been saved**
 - View – Record details can be viewed in non-editable mode
 - Edit - Details can be edited in the Material Information and Specification tab.
 - Activate - Users with the appropriate permissions can activate an inactive material by adding additional information and specifying the material’s elemental specifications. Activate the material after a confirmation message
 - “Do you want to activate this material “MAT ID”?”
- **Pagination Controls:** Navigation buttons to browse through multiple pages of records, if applicable (for more than 10 records).
- Rows Per page : Default 10, Dropdown values: 10, 20, 30, 40, 50

Export Function: The export function must extract ALL the information including chemical results of the list of records shown based on the combined results of filter selection, sort and search criteria. as the following example:

Material ID	Material Name	Material Type	Date Created	Status
B1F2_281	PSSI Refusion B1F2	WIP	09/06/24	Inactive
B111_145	PSSI 8030 Ht Ph	WIP	09/06/24	Inactive
B111_3	PSSI4520DC	WIP	09/06/24	Inactive

B111_306	PSO dopE P Piscine	WIP	09/06/24	Inactive
B111_1	PSSI2003	Molten	09/06/24	Active
B111_4	PSSI12030	WIP	09/06/24	Inactive
B111_259	PSSI50015	WIP	09/06/24	Inactive
B111_150	PSSI Ht Phos	WIP	09/06/24	Inactive
B111_146	PSSI BAS BORE	Molten	09/06/24	Active
B111_5	PSSI5003 HP	WIP	09/06/24	Inactive
B111_2	PSSI3503	WIP	09/06/24	Inactive
B111_149	PSSI 5010 EVONIK	Molten	09/06/24	Active
B111_309	PSSI 5003 Ht Alu	WIP	09/06/24	Inactive
B111_153	PSSI2205	WIP	09/06/24	Inactive
B111_303	PSSI 5003	WIP	09/06/24	Inactive
B111_299	PSSI45015	WIP	09/06/24	Inactive
B1F1_280	PSSI Refusion B1F1	WIP	09/06/24	Inactive

Exported File Name: “WIP_DDMMYY”

Customize Columns: Users can enable or disable all columns based on their preference. Only the enabled columns will be visible in the list. Columns marked as ‘frozen’ will be enabled by default and cannot be modified.

Material ID	Material Name	Material Type	Created At	Status
B111_148	PSSI 4503 B Alu	WIP	10/10/2024	Active
B111_146	PSSI BAS BORE	WIP	10/10/2024	Active
B111_4	PSSI12030	WIP	10/10/2024	Active
MB02_200	Charbon de bois	WIP	10/10/2024	Active
B1F1_280	PSSI Refusion B1F1	WIP	10/10/2024	Active
B111_309	PSSI 5003 Ht Alu	WIP	10/10/2024	Inactive
B111_302	PSSI4520DC	WIP	10/10/2024	Active
B111_306	PSO dopE P Piscine	WIP	10/10/2024	Active
B111_303	PSSI 5003	WIP	10/10/2024	Inactive
B111_299	PSSI45015	WIP	10/10/2024	Active

MM : WIP Active 5 Inactive 35

Search Filters

Material ID	Material Name	Material Type	Created At	Status
B111_148	PSSI 4503 B Alu	WIP	10/10/2024	Active
B111_146	PSSI BAS BORE	WIP	10/10/2024	Active
B111_4	PSSI2030	WIP	10/10/2024	Active
MB02_200	Charbon de bois	WIP	10/10/2024	Active
B1F1_280	PSSI Refusion B1F1	WIP	10/10/2024	Active
B111_309	PSSI 5003 Ht Alu	WIP	10/10/2024	Inactive
B111_302	PSSI4520DC	WIP	10/10/2024	Active
B111_306	PSO dopE P Piscine	WIP	10/10/2024	Active
B111_303	PSSI 5003	WIP	10/10/2024	Inactive
B111_299	PSSI45015	WIP	10/10/2024	Active

Showing 10 of 80

2. Add Material Details

This screen will allow users to input and manage records, organised into two Tabs: Material Information and Material Specification. Mandatory fields will be marked with an asterisk (*). Below is a detailed layout incorporating the requirements.

Header: Back Icon | **B1F2_281 | PSSI Refusion B1F2** (Material ID | Material Name)

MM : WIP Active 5 Inactive 35

Search Filters Export View

Material ID	Material Name	Material Type	Created At	Status	Action
B111_148	PSSI 4503 B Alu	WIP	10/10/2024	Active	
B111_146	PSSI BAS BORE	WIP	10/10/2024	Active	
B111_4	PSSI2030	WIP	10/10/2024	Active	
MB02_200	Charbon de bois	WIP	10/10/2024	Active	
B1F1_280	PSSI Refusion B1F1	WIP	10/10/2024	Active	
B111_309	PSSI 5003 Ht Alu	WIP	10/10/2024	Inactive	
B111_302	PSSI4520DC	WIP	10/10/2024	Active	
B111_306	PSO dopE P Piscine	WIP	10/10/2024	Active	
B111_303	PSSI 5003	WIP	10/10/2024	Inactive	
B111_299	PSSI45015	WIP	10/10/2024	Active	

Showing 10 of 80

Rows Per Page: 10

Material Information Tab

Basic Information (Read-only; fetched from external ERP system):

- Material ID = (Concatenation of ERP ID and Ops ID)

- Material Name
- ERP Commercial Material ID
- ERP Commercial Material Name
- ERP ACC Material ID
- ERP ACC Material Name
- Ops Technical Material ID
- Material Type
- Status
- Date Created
- Material Description

Additional Information - These details are to be captured here, they are the following

- **Effective Date***:
 - User selects the date from a calendar selector. The system shall allow users to capture a set of values with an effective date, which can be in the past, present, or future.
 - Mandatory - Yes
 - Default value - Current date
 - Field Type - Calendar picker
 - Validation - No
- **Available***
 - Single select dropdown
 - Mandatory - Yes
 - Default value - None
 - Values: Yes, No
- **Spec References***
 - User inputs the value
 - Mandatory - Yes
 - Default value - None
 - Field Type - User input
 - Validation - Numeric 2 decimal values. Max allowed 999,999.99
- **Density***
 - User inputs the value
 - Mandatory - Yes
 - Default value - None
 - Field Type - User input
 - Validation - Numeric 4 decimal values. Max allowed 999,999.9999
 - Units - Depending on Unit System setup on Plant config (g/l metric system or lbm/ft^3)

Action Buttons

- **Save & Continue:**
 - Upon saving the details, the user is redirected to the **Material Specification** tab.

- On the **list screen**:
 - Since the first tab's details have been entered,
 - An **Edit** option will appear in the **action menu** for the corresponding item.
 - Since Material Specification has default 0 values, User can now activate the material.
- **Cancel:** Cancels the current operation and returns to the list screen

Material Information		Material Specification		
Basic Information				
Material ID B111_148	Material Name PSSI 4503 B Alu	ERP Commercial Material ID B111	ERP Commercial Material Name PS Silicium mEtal brut CHI	ERP ACC Material ID B111
ERP ACC Material Name PS Silicium mEtal brut	Ops Technical Material ID 148	Material Type WIP	Status Active	Date Created 01/21/2025
Material Description PS Silicium Dow Fe<0.45% Ca<0.032%				
Additional Information				
Effective Date* 18/08/2024	Available* Select	Spec References* Enter Value	Density* Enter Value	g/cm³
<input type="button" value="Cancel"/> <input type="button" value="Save & Continue"/>				

Material Specification Tab

Users can edit material specifications, including chemistry, physical specifications. Under this section “Low”, “Aim” and “High” values for various elements are captured. The elements are mapped to a particular material type.

The list of elements for Chemical and Physical can be seen in the design provided.

Each Chemistry element will have the following

- **Low -**
 - User input
 - Mandatory - No
 - Default - 0
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be lower than Aim and High
- **Aim**
 - User input
 - Mandatory - No
 - Default - 0
 - Field Validation -

- only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be higher than Low and lower than High
- High
 - User input
 - Mandatory - No
 - Default - 0
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be higher than Low and Aim
- Warning Tolerance
 - System calculates using this formula when Calculate Warning Tolerance button is clicked

```
def calc_warning_tolerances(low, high, aim):

    cpk = 1.33

    if low == 0:

        if high > aim:

            return (high - aim) / cpk

        else:

            return 0

    else:

        if (high - aim) > (aim - low):

            return (aim - low) / cpk

        else:

            return 0
```

- **Control Elements** - Control elements determine which elements are mandatory for grading in the material specification.
 - Checkbox:
 - Can be **selected** or **deselected**.
 - **Default state:** Unselected.
 - **Element Restrictions:** Only the following elements can be checked/unchecked:
 - **Al, Ca, Fe, Ni, P, Ti, V**
 - All other elements will **not** have a checkbox option (i.e., selection is not permitted).

Each Physical element will have the following

- Low -
 - User input
 - Mandatory - No
 - Default - 0
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be lower than Aim and High
- Aim
 - User input
 - Mandatory - No
 - Default - 0
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be higher than Low and lower than High
- High
 - User input
 - Mandatory - No
 - Default - 0
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be higher than Low and Aim

Action Buttons

- **Save**
 - Upon saving the details, the user is redirected to the **List** page.
 - On the **list screen**:
 - Since both tab's details have been entered,
 - An **Edit** option will appear in the **action menu** for the corresponding item.
 - User can now activate the material
- **Cancel**: Cancels the current operation and returns to the list screen

B111_148 | PSSI 4503 B Alu

Material Information						Material Specification					
Chemistry Elements											
Elements (in %)	Low	Aim	High	Warning Tolerance	Control	Elements (in %)	Low	Aim	High	Warning Tolerance	Control
Al	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Mo	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
As	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Na	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Au	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Nb	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Be	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Nd	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
B	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Ni	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Ca	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Pb	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Cd	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Pr	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Ce	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Pt	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Co	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	P	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>

Cancel Save

3. Edit Material Details

- This screen will allow users to input and manage records, organised into two Tabs: Material Information and Material Specification. Mandatory fields will be marked with an asterisk (*). Below is a detailed layout incorporating the requirements.
- Header:** Back Icon | **B1F2_281 | PSSI Refusion B1F2** (Material ID | Material Name)

Material Information Tab

Basic Information (Read-only; fetched from external ERP system):

Basic Information (Read-only; fetched from external ERP system):

- Material ID = (Concatenation of ERP ID and Ops ID)
- Material Name
- ERP Commercial Material ID
- ERP Commercial Material Name
- ERP ACC Material ID
- ERP ACC Material Name
- Ops Technical Material ID
- Material Type
- Status
- Date Created
- Material Description

Additional Information -

- When viewed in edit mode, only the current values of fields (based on effective date) will be displayed. If a recently updated value is older than the current value, it will be saved. However, these values will not be displayed in edit mode but can be viewed by downloading the Excel history.
- Only one value can exist for a given effective date. In Edit mode, if a record with the same effective date already exists in the system, the user will receive a warning and be asked if they want to proceed and overwrite the existing details.
- Historical and future data can be viewed by downloading the Excel file using the download option in View mode.
 - **Effective Date***:
 - Editable and pre-populated with the existing value.
 - Default value - Current date
 - Mandatory: Yes
 - **Available***
 - Editable and pre-populated with the existing value.
 - Default value - None
 - Mandatory: Yes
 - **Spec References***
 - Editable and pre-populated with the existing value.
 - Default value - None
 - Mandatory: Yes
 - **Density***
 - Editable and pre-populated with the existing value.
 - Default value - None
 - Mandatory: Yes
- **Action Buttons**
 - **Save & Continue:**
 - Upon saving the details, the user is redirected to the **Material Specification** tab.
 - On the **list screen**:
 - An **Edit** option will appear in the **action menu** for the corresponding item.
 - Since Material Specification has default 0 values, User can now activate the material.
 - **Cancel:** Cancels the current operation and returns to the list screen

The screenshot shows the DaVinci software interface with the material information for B111_148. The left sidebar has icons for Home, Materials, Components, Bills of Material, Work Orders, and Reports. The main area has tabs for 'Material Information' and 'Material Specification'. Under 'Material Information', there are sections for 'Basic Information' and 'Additional Information'. 'Basic Information' includes fields for Material ID (B111_148), Material Name (PSSI 4503 B Alu), ERP Commercial Material ID (B111), ERP Commercial Material Name (PS Silicium mEtal brut CHI), ERP ACC Material ID (B111), ERP ACC Material Name (PS Silicium mEtal brut), Ops Technical Material ID (148), Material Type (WIP), Status (Active), and Date Created (01/21/2025). 'Additional Information' includes fields for Effective Date (18/08/2024), Available (Yes), Spec References (2), and Density (5.00 g/cm³). At the bottom right are 'Cancel' and 'Save & Continue' buttons.

Material Specification Tab

- Users can edit material specifications, including chemistry, physical specifications.
- Under this section “Low”, “Aim” and “High” values for various elements are captured. The elements are mapped to a particular material type.
- In Edit mode update of element values inserts a new set of records with the date.
- For any given date only one set can exist, the older values will be overwritten for an existing date. Thus, storing historical data will help generate reports with appropriate data for all dates.
- Historical data can be viewed by downloading the Excel file using the download option in View mode
- The list of elements for Chemical and Physical can be seen in the design provided.
- **Each Chemistry element will have the following**
 - Low -
 - Editable and pre-populated with the existing value.
 - Default value - 0
 - Mandatory: No
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be lower than Aim and High
 - Aim
 - Editable and pre-populated with the existing value.
 - Default value - 0
 - Mandatory: No
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point

- It has to be higher than Low and lower than High
- High
 - Editable and pre-populated with the existing value.
 - Default value - 0
 - Mandatory: No
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be higher than Low and Aim
- Warning Tolerance
 - System calculates using this formula when Calculate Warning tolerance button is clicked

```
def calc_warning_tolerances(low, high, aim):

    cpk = 1.33

    if low == 0:

        if high > aim:

            return (high - aim) / cpk

        else:

            return 0

    else:

        if (high - aim) > (aim - low):

            return (aim - low) / cpk

        else:

            return 0
```
- Control Elements - Same as WIP. (Al, Ca, Fe, Ni, P, Ti, V)
 - Checkbox:
 - Editable and pre-populated with the existing value.
 - Default value - Unselected
 - Mandatory: No
 - **Element Restrictions:** Only the following elements can be checked/unchecked:
 - **Al, Ca, Fe, Ni, P, Ti, V**
 - All other elements will **not** have a checkbox option (i.e., selection is not permitted).
- **Each Physical element will have the following**
 - Low -
 - Editable and pre-populated with the existing value.

- Mandatory - No
- Default - 0
- Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be lower than Aim and High
- Aim
 - Editable and pre-populated with the existing value.
 - Mandatory - No
 - Default - 0
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be higher than Low and lower than High
- High
 - Editable and pre-populated with the existing value.
 - Mandatory - No
 - Default - 0
 - Field Validation -
 - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
 - It has to be higher than Low and Aim
- **Action Buttons**
 - **Save**
 - Upon saving the details, the user is redirected to the **List** page.
 - On the **list screen**:
 - Since both tab's details have been entered,
 - An **Edit** option will appear in the **action menu** for the corresponding item.
 - User can now activate the material
 - **Cancel**: Cancels the current operation and returns to the list screen

B111_306 | PSO dopE P Piscine

Material Information						Material Specification					
Chemistry Elements						Chemistry Elements					
Elements (in %)	Low	Aim	High	Warning Tolerance	Control	Elements (in %)	Low	Aim	High	Warning Tolerance	Control
Al	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Mo	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
As	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Na	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Au	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Nb	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Be	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Nd	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
B	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Ni	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Ca	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Pb	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Cd	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Pr	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>
Ce	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>	Pt	0.0000	0.0000	0.0000	0.0000	<input type="checkbox"/>

Calculate Warning Tolerance

Cancel Save

4. View Material

This screen will allow users to input and manage records, organised into two Tabs: Material Information and Material Specification. Mandatory fields will be marked with an asterisk (*). Below is a detailed layout incorporating the requirements.

Header: Back Icon | **B1F2_281 | PSSI Refusion B1F2** (Material ID | Material Name) | **Edit Icon:** Allows users to switch from view mode to edit mode to update the record.

MM : WIP Active 5 Inactive 35

Material ID	Material Name	Material Type	Created At	Status	
B111_148	PSSI 4503 B Alu	WIP	10/10/2024	Active	
B111_146	PSSI BAS BORE	WIP	10/10/2024	Active	
B111_4	PSSI2030	WIP	10/10/2024	Active	
M802_200	Charbon de bois	WIP	10/10/2024	Active	
B1F1_280	PSSI Refusion B1F1	WIP	10/10/2024	Active	
B111_309	PSSI 5003 Ht Alu	WIP	10/10/2024	Inactive	
B111_302	PSSI4520DC	WIP	10/10/2024	Active	
B111_306	PSO dopE P Piscine	WIP	10/10/2024	Active	
B111_303	PSSI 5003	WIP	10/10/2024	Inactive	
B111_299	PSSI45015	WIP	10/10/2024	Active	

Showing 10 of 80

< 1 2 3 ... 8 > Rows Per Page : 10

Material Information Tab

Basic Information (Read-only; fetched from external ERP system):

- Material ID = (Concatenation of ERP ID and Ops ID)
- Material Name
- ERP Commercial Material ID
- ERP Commercial Material Name
- ERP ACC Material ID
- ERP ACC Material Name
- Ops Technical Material ID
- Material Type
- Status
- Date Created
- Material Description

Additional Information - These details are to be captured here, they are the following

- **Effective Date:**
 - **Export Icon:**
 - Historical and future data can be viewed by downloading the CSV file using the download option.
 - The tooltip should read “Download CSV”.
 - Downloads the record in CSV format.
 - The file must include the following headers and display the values as the following example:
 - Exported File Name: “**DDMMYY_WIP_Additional_Information**”

Effective Date	Material ID	Material Name	Material Type	Available	Spec References	Density	Created By	Modified By	Created At	Modified At
23/06/2022	B1F2_81	PSSI Refusion B1F2	WIP	No	1.00g/cm ³	superuser superuser Rose Danish	autosuperuser autosuperuser Auto Superuser	23/06/2025 09:15 AM	14/07/2025 07:16 AM	

- **Available**
- **Spec References**
- **Density**

The screenshot shows the DaVinci software interface with the Material Specification tab selected. The page title is "B111_148 | PSSI 4503 B Alu". On the left is a vertical toolbar with various icons. The main content area has two tabs: "Material Information" (selected) and "Material Specification". Under "Material Information", there are two sections: "Basic Information" and "Additional Information".

Basic Information	Material Specification			
Material ID B111_148	Material Name PSSI 4503 B Alu	ERP Commercial Material ID B111	ERP Commercial Material Name PS Silicium mEtal brut CHI	ERP Commercial Material Name PS Silicium mEtal brut CHI
ERP ACC Material ID B111	ERP Acc Material Name PS Silicium mEtal brut	Ops Technical Material ID 148	Material Type WIP	Status Active
Date Created 01/21/2025	Material Description PS Silicium Dow Fe<0.45% Ca<0.032%			
Additional Information				
Effective Date 18.08.24	Spec References 2	Density 5.00 g/cm³		
Available Yes				

Material Specification Tab

Chemistry, Physical specification of various elements will be available in read only mode.

Each Chemistry element will have the following

- Low
- Aim
- High
- Warning Tolerance - Once a value is **overridden by the user**, it is highlighted with a background to indicate the change.
- Control Elements checkbox

Each Physical element will have the following

Low

- Aim
- High

Export Specification

- Historical data can be viewed by downloading the Excel file using the download option.
- The tooltip should read “Download CSV”.
- Downloads the record in CSV format.
- The file must include the following headers and display the values as the following example:
- Exported File Name: “**WIP_MaterialSpecification_DDMMYY**”

Element (in %)	Element Group	L	A	H	Warning Tolerance	Contrl	Created At	Modified At	Plant Material ID	Plant	Plan	Created By	Modified By
Al	CHE	0.8	92.97	5	0.0075	TR UE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
As	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Au	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Be	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
B	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Ca	CHE	1.2	3	0	0	TR UE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Cd	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Ce	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Co	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Cr	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Cu	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
C	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Dy	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Er	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Fe	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Ga	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Gd	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Ge	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Hf	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
Hg	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	
In	CHE	0.0	0	0	0	FAL SE	05/06/2025 07:24 AM	05/06/2025 07:24 AM	6V_B1F26_281	V	devara Dev ara	devara Dev ara	

Ta	CHE	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
Te	CHE	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
Ti	CHE	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
V	CHE	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
W	CHE	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
Y	CHE	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
Zn	CHE	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
Zr	CHE	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
Ash	PHY	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
Moistur e	PHY	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara
Volatile s	PHY	0	0	0	FAL	05/06/2025	05/06/2025	6V_B1F26	V	devara Dev ara	devara Dev ara

The screenshot shows the DaVinci software interface for a material record. The top navigation bar includes the VIRTUES logo, the DaVinci logo, and a user profile for "Nora James". The main content area has two tabs: "Material Information" and "Material Specification". The "Material Information" tab displays a table for "Chemistry Elements" with columns for Element name, Low, Aim, High, Warning Tolerance, and Control. The "Material Specification" tab displays a similar table for "Elements (in %)" with columns for Element name, Low, Aim, High, Warning Tolerance, and Control. Both tables include rows for various elements like Al, As, Au, Be, B, Ca, Cd, Ce, Co, Cr, Mo, Na, Nb, Nd, Ni, Pb, Pr, Pt, P, and Re.

Elements (in %)	Low	Aim	High	Warning Tolerance	Control
Al	0.0000	0.0000	0.0000	0.0000	✖
As	0.0000	0.0000	0.0000	0.0000	—
Au	0.0000	0.0000	0.0000	0.0000	—
Be	0.0000	0.0000	0.0000	0.0000	—
B	0.0000	0.0000	0.0000	0.0000	—
Ca	0.0000	0.0000	0.0000	0.0000	✖
Cd	0.0000	0.0000	0.0000	0.0000	—
Ce	0.0000	0.0000	0.0000	0.0000	—
Co	0.0000	0.0000	0.0000	0.0000	—
Cr	0.0000	0.0000	0.0000	0.0000	—
Mo	0.0000	0.0000	0.0000	0.0000	—
Na	0.0000	0.0000	0.0000	0.0000	—
Nb	0.0000	0.0000	0.0000	0.0000	—
Nd	0.0000	0.0000	0.0000	0.0000	—
Ni	0.0000	0.0000	0.0000	0.0000	✖
Pb	0.0000	0.0000	0.0000	0.0000	—
Pr	0.0000	0.0000	0.0000	0.0000	—
Pt	0.0000	0.0000	0.0000	0.0000	—
P	0.0000	0.0000	0.0000	0.0000	✖
Re	0.0000	0.0000	0.0000	0.0000	—

View Change History

This button opens a modal or section showing a chronological list of all changes made to the record, including:

- Timestamp of change
- Field(s) modified
- Previous and updated values
- Name of the user who made the change
- **Export Icon - Downloads the records in CSV format, the tooltip should read “Download CSV”.**
- Export Filename - “DDMMYY_WIP_ChangeHistory”

SPECIFICATION CHANGE HISTORY

Date	Username	Element	Old			New				
			Low	Aim	High	Control	Low	Aim		
05/01/2025 09:00 AM	JSmithOperator	Al	0.0000	0.0000	0.0000		1.9000	2.0000	2.4500	
04/01/2025 09:00 AM	superadmin	B	0.0000	0.0000	0.0000		1.9000	2.0000	2.4500	
		Ca	0.0000	0.0000	0.0000		0.0000	1.0000	0.0000	
		Al	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	
02/01/2025 07:00 AM	superadmin	Moisture	0.0000	0.0000	0.0000	—	0.0000	0.0000	2.4500	—
01/01/2025 09:00 AM	superadmin	B	0.0000	0.0000	0.0000		1.9000	2.0000	2.4500	
		Ca	0.0000	0.0000	0.0000		0.0000	1.0000	0.0000	

Chemistry Elements

Elements (in %)	Low	Aim	High
Al	0.0000	0.0000	0.0000
As	0.0000	0.0000	0.0000
Au	0.0000	0.0000	0.0000
Be	0.0000	0.0000	0.0000
B	0.0000	0.0000	0.0000
Ca	0.0000	0.0000	0.0000
Cd	0.0000	0.0000	0.0000
Ce	0.0000	0.0000	0.0000
Co	0.0000	0.0000	0.0000
Cr	0.0000	0.0000	0.0000