Da Vinci Smart Manufacturing

BRD S04.01.03_Master Data_Material Maintenance_WIP

Version	Created/Modified by	Description	Date
1.0	Leopoldo Rivera Sahana Badal	S04.01.03 First draft	26/06/2025
2.0	Sahana Badal	S04.01.02 Second Draft	23/07/2025

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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

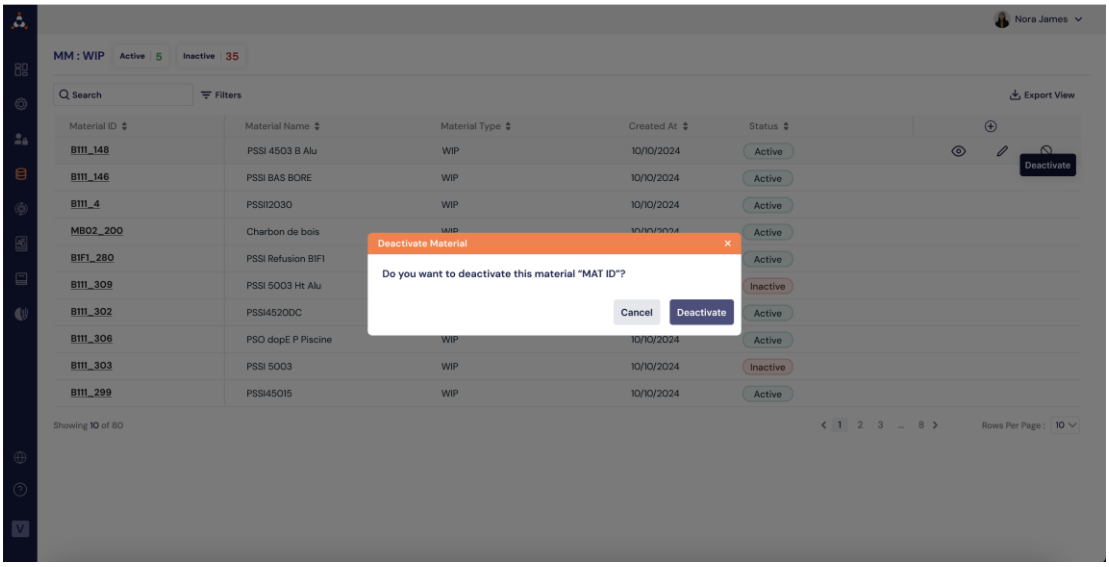
- **Material ID**:
    - **Material ID**
    - Sorting: Yes
    - Frozen - Yes
- **Material Name**:
    - **Material Name corresponding to the Material ID**
    - Sorting: Yes
    - Frozen: No
- **Material Type**:
    - Material Type, the material ID belongs to
    - Sorting: Yes
    - Frozen: No
- **Created At**: **CR-VD-5347**
    - **Date and time Material was created as per ERP system**
    - Sorting: Yes

- Frozen: No

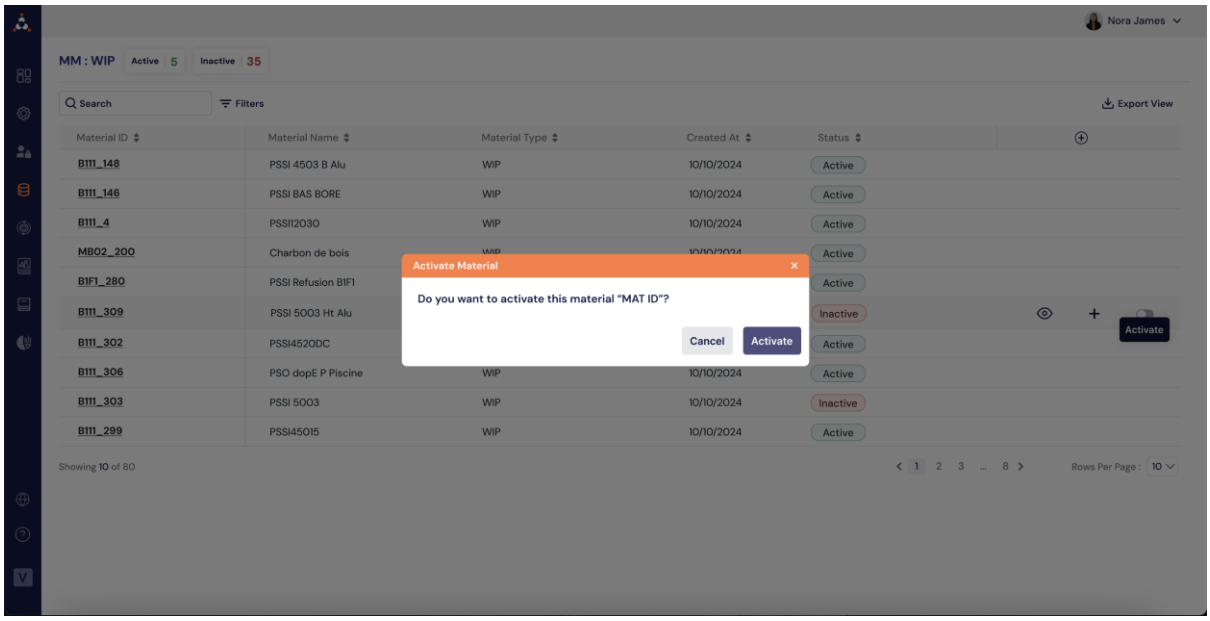
- **Created By** CR-VD-5347
  - Auto-populated as “System“
  - Sorting: Yes
  - Frozen: No
- **Modified At** CR-VD-5347
  - Last record modified Date and time
  - Sorting: Yes
  - Frozen – No
- **Modified By** CR-VD-5347
  - User ID | First Name Last Name of user who last modified the record
  - Sorting: 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 - CR-VD-4481 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 -**CR-VD-4481** 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:

CR-VD-5348

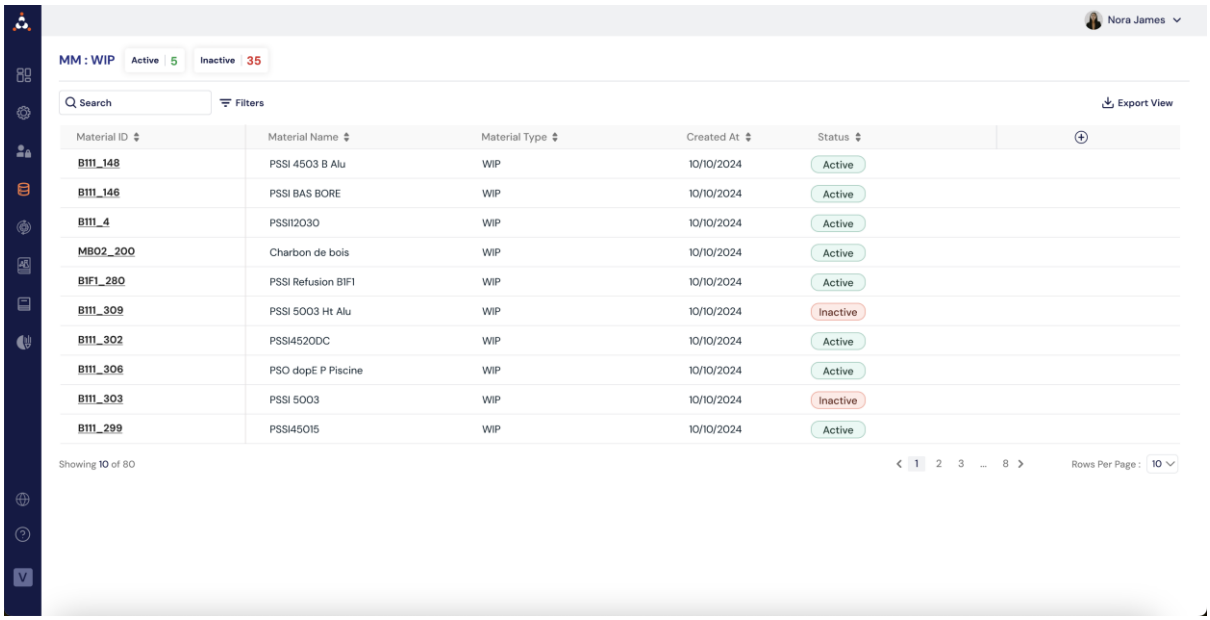
Material ID	Material Name	Material Type	Created At	Created By	Modified At	Modified By	Status
PSS00058_OP145	Pssi 8030 Ht Ph	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Active
PSS00059_OP281	Pssi Refusion B1F2	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	Active
PSS00050_OP003	Pssi4520Dc	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	Inactive
PSO00001_OP306	Pso Dope P Piscine	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	Active
PSS00057_OP001	Pssi2003	Molten	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive
PSS00055_OP004	Pssi12030	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	04/06/2025 | 06:27 AM		Inactive

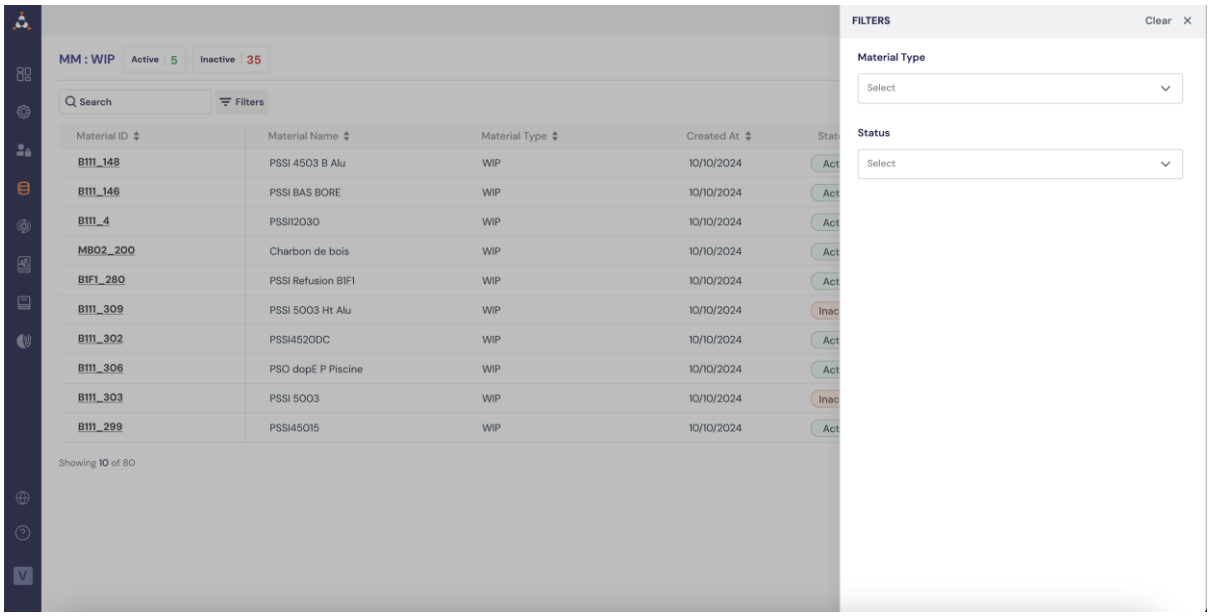
PSS00056_OP259	Pssi50015	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive
PSS00007_OP150	Pssi Ht Phos	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive
PSS00027_OP146	Pssi Low Bore	Molten	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	04/06/2025 | 06:27 AM		Inactive
PSS00053_OP005	Pssi5003 Hp	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive
PSS00030_OP002	Pssi3503	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive
PSS00002_OP149	Pssi 5010 Evonik	Molten	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	04/06/2025 | 06:27 AM		Inactive
PSS00052_OP309	Pssi 5003 Ht Alu	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive
PSS00010_OP153	Pssi2205	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive

PSS00051_OP303	Pssi 5003	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	04/06/2025 | 06:27 AM		Inactive
PSS00049_OP299	Pssi45015	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive
PSS00045_OP280	Pssi Refusion B1F1	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive
PSS00048_OP298	Pssi2501	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	04/06/2025 | 06:27 AM		Inactive
PSS00008_OP151	Pssi120 30	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive
PSS00026_OP144	Pssi 2003	Molten	04/06/2025 | 06:27 AM	Sahana | Sahana Badal	04/06/2025 | 06:27 AM		Inactive
PSS00011_OP154	Pssi2510	WIP	04/06/2025 | 06:27 AM	Sahana | Sahana Badal			Inactive

Exported File Name: "WIP_DD-MM-YYYY" CR-VD-4489

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.

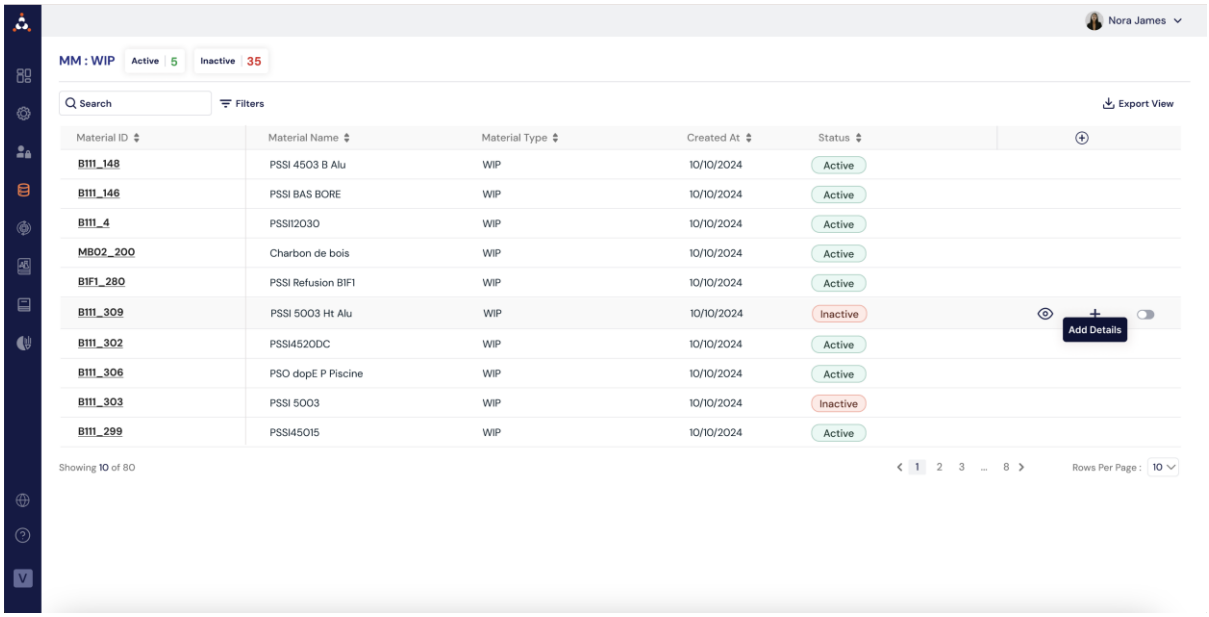




2. Add Material Details

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)



Material Information Tab

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

CR-VD-4658

Scenario 1: ERP ID exists, but no Ops ID

- Material ID = ERP Material ID
- Material Name
- Material Type
- Status
- Date Created
- Material Description

Scenario 2: ERP ID and Ops ID exist with a one-to-one mapping

- Material ID = ERP Material ID = OPS Material ID
- Material Name
- Material Type
- Status
- Date Created
- Material Description

Scenario 3: ERP ID and Ops ID exist and are different (i.e., no one-to-one mapping)

- Material ID = (Concatenation of ERP ID and Ops ID)
- Material Name
- ERP Commercial Material ID
- ERP Commercial Material Name
- Ops Technical Material ID

- Material Type
- Status
- Date Created
- Material Description

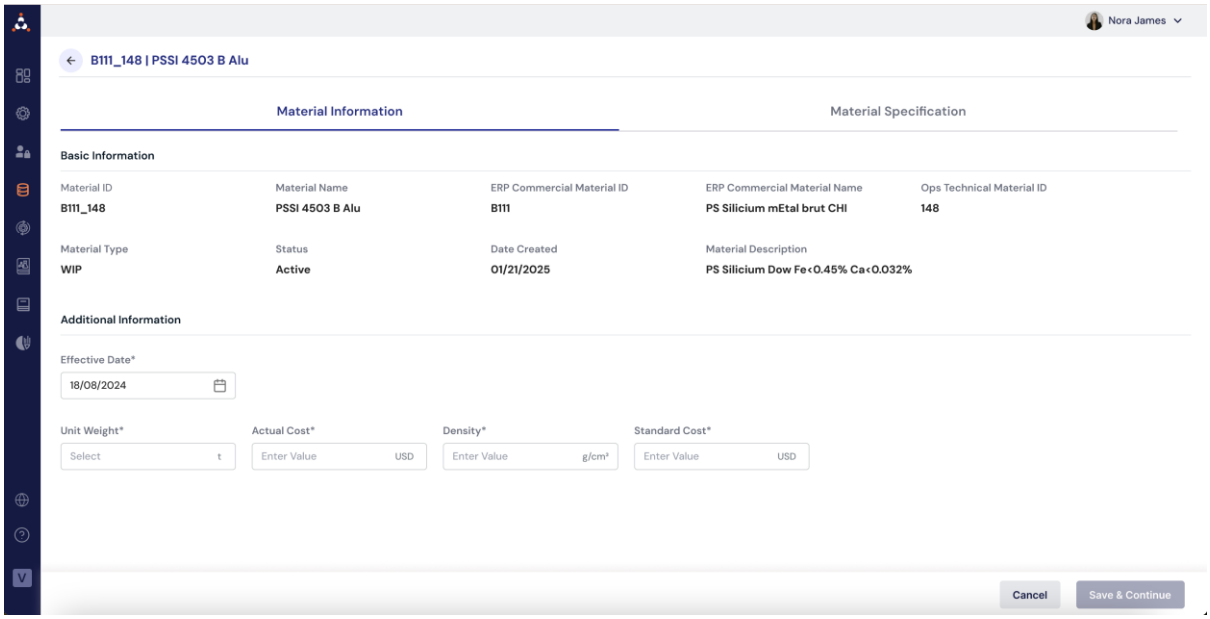
Additional Information - These details are to be captured here, they are the following

CR-VD-4654

- ☐ **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
- ☐ **Unit Weight***
  - User inputs the unit weight value
  - Mandatory - Yes
  - Default value - None
  - Field Type - User input
  - Validation - Numeric 2 decimal values. Max allowed 999,999.99
  - Units - Kg
- ☐ **Actual Cost***
  - User inputs the value
  - Mandatory - Yes
  - Default value - None
  - Field Type - User input
  - Validation - Numeric 2 decimal values. Max allowed 999,999.99
  - Units - USD (currency from Plant Config)
- ☐ **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)
- ☐ **Standard Cost***
  - User inputs the value
  - Mandatory - Yes
  - Default value - None
  - Field Type - User input
  - Validation - Numeric 2 decimal values. Max allowed 999,999.99
  - Units – USD (currency from Plant Config)

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 Specification Tab

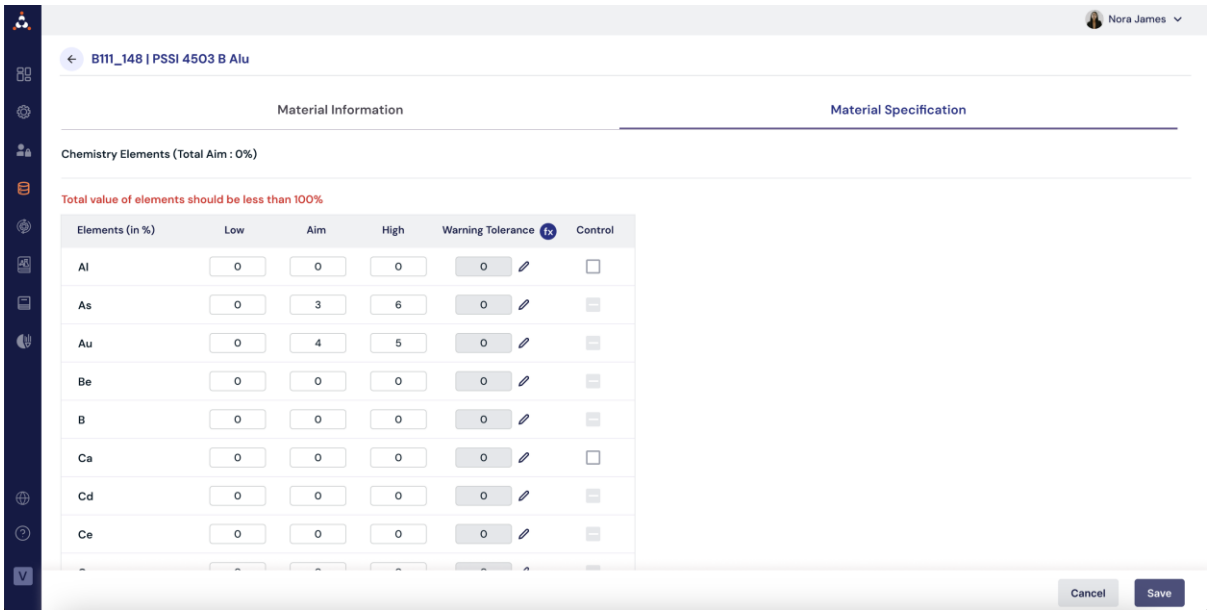
Users can edit material specifications, including chemistry, physical elements. Under this section "Low", "Aim" and "High" values for various elements are captured. The elements are mapped to a particular material type.

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 **CR-VD-4655**
  - 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 **CR-VD-4655**
  - Field Validation -
    - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
    - The sum of all *Aim* values represents a percentage-based split of elements in the material. While it is **not required to total exactly 100%**, it **must not exceed 100%**. Total Aim value will be shown next to section heading. A validation message that "Total value of elements should be less than 100%" will be displayed **CR-VD-3979**



    - It has to be higher than Low and lower than High
- High
  - User input
  - Mandatory - No
  - Default – 0 **CR-VD-4655**
  - 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
```

- This calculation is triggered automatically when **Low**, **Aim**, and **High** values are entered. **CR-VD-4656**
- Each warning tolerance value can be manually edited by clicking the **edit icon** next to the respective field. **CR-VD-4657**
- **If Warning Tolerance is 0 the edit icon will be disabled. Tooltip will read "Edit disabled for 0 Warning Tolerance"**
- **Value Deviation Validation:** If the user-entered value **deviates by more than ±5%** from the system-calculated value, the system shall **display a warning message** before accepting the value. "Entered value differs by more than 5% from the system-calculated value. Are you sure you want to proceed? Are you sure you want to proceed?". Once confirmed user entered value can be saved.
- Once a value is **overridden by the user**, it is highlighted with a background to indicate the change.
- **Overridden values** will display a **reset icon**, allowing users to revert them back to the **system-calculated value**.
- A **tooltip** appears on hover, explaining that the value has been **manually overridden**.
- **Default – 0**
- only integers, Max 100/ Min 0, 3 integers and Four places after decimal point

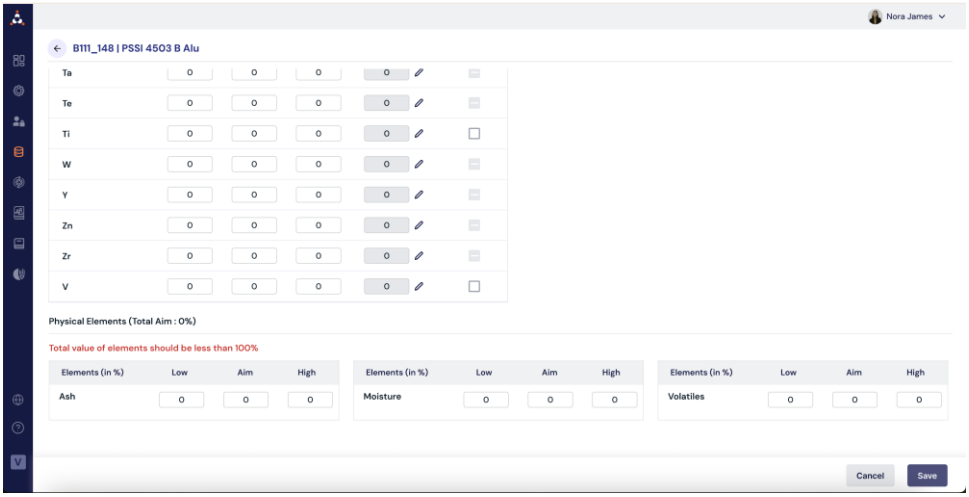
- **Control Elements -** Control elements determine which elements are mandatory for grading in the material specification.
  - Checkbox:
    - Can be **selected** or **deselected**.
    - **Default state**: Unselected.
  - **Element Restrictions**: Only the following elements can be checked/unchecked:
    - **Al, Ca, Fe, Ni, P, Ti, V**

- All other elements will **not** have a checkbox option (i.e., selection is not permitted).

- **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

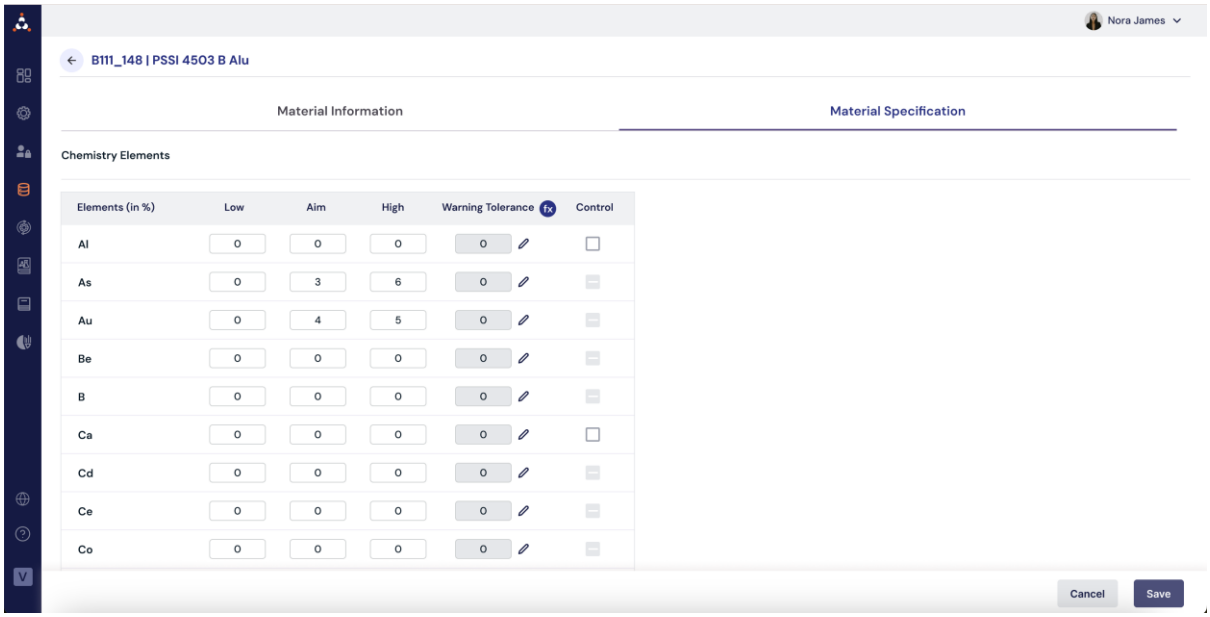
- Low -
  - User input
  - Mandatory - No
  - Default – 0 **CR-VD-4655**
  - Field Validation -
    - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
    - It has to be lower than Aim and High
- Aim
  - User input
  - Mandatory - No
  - Default – 0 **CR-VD-4655**
  - Field Validation -
    - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
    - The sum of all *Aim* values represents a percentage-based split of elements in the material. While it is **not required to total exactly 100%**, it **must not exceed 100%**. Total value will be shown next to section heading. A validation message that "Total value of elements should be less than 100%" will be displayed **CR-VD-3979**



    - It has to be higher than Low and lower than High
- High
    - User input
    - Mandatory - No
    - Default – 0 **CR-VD-4655**
    - 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



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):

CR-VD-4658

Scenario 1: ERP ID exists, but no Ops ID

- Material ID = ERP Material ID
- Material Name
- Material Type
- Status
- Date Created
- Material Description

Scenario 2: ERP ID and Ops ID exist with a one-to-one mapping

- Material ID = ERP Material ID = OPS Material ID
- Material Name
- Material Type
- Status

- Date Created
- Material Description

Scenario 3: ERP ID and Ops ID exist and are different (i.e., no one-to-one mapping)

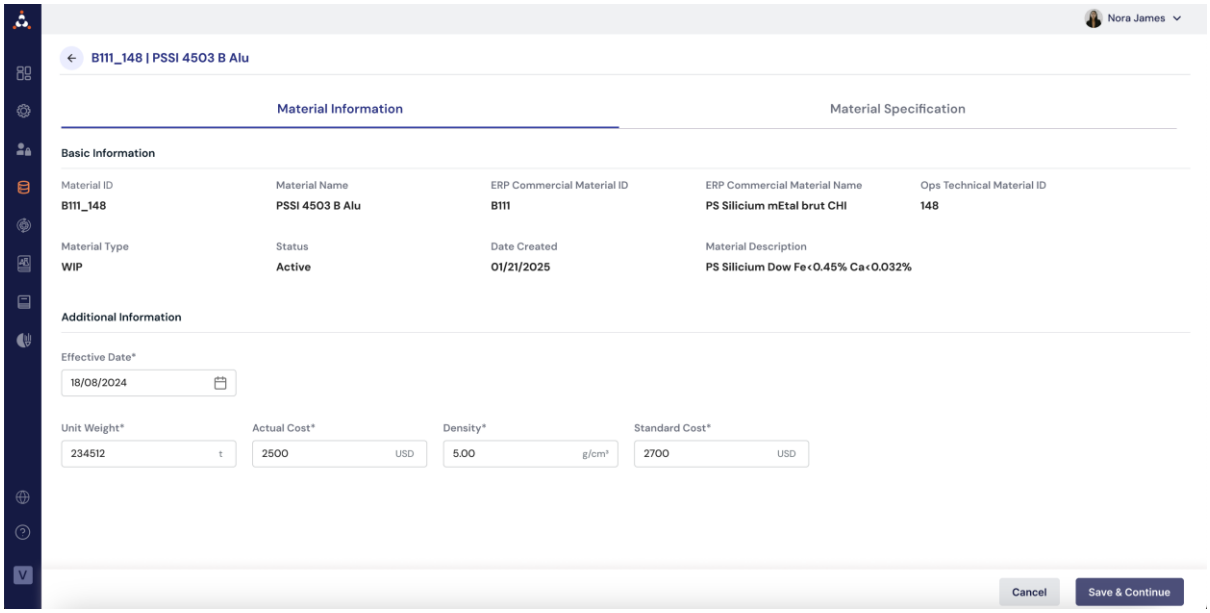
- Material ID = (Concatenation of ERP ID and Ops ID)
- Material Name
- ERP Commercial Material ID
- ERP Commercial Material Name
- Ops Technical Material ID
- Material Type
- Status
- Date Created
- Material Description

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.

  CR-VD-4654
  - **Effective Date***:
    - Editable and pre-populated with the existing value.
    - Default value - Current date
    - Mandatory: Yes
  - **Unit Weight***
    - Editable and pre-populated with the existing value.
    - Default value - None
    - Mandatory: Yes
  - **Actual Cost***
    - 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
  - **Standard Cost***
    - 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



Material Specification Tab

- Users can edit material specifications, including chemistry and 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 – 0 **CR-VD-4655**
        - 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 – 0 **CR-VD-4655**
  - Mandatory: No
  - Field Validation -
    - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
    - The sum of all *Aim* values represents a percentage-based split of elements in the material. While it is **not required to total exactly 100%**, it **must not exceed 100%**. Total value will be shown next to section heading. A validation message that "Total value of elements should be less than 100%" will be displayed **CR-VD-3979**
    - It has to be higher than Low and lower than High
- High
  - Editable and pre-populated with the existing value.
  - Default – 0 **CR-VD-4655**
  - 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

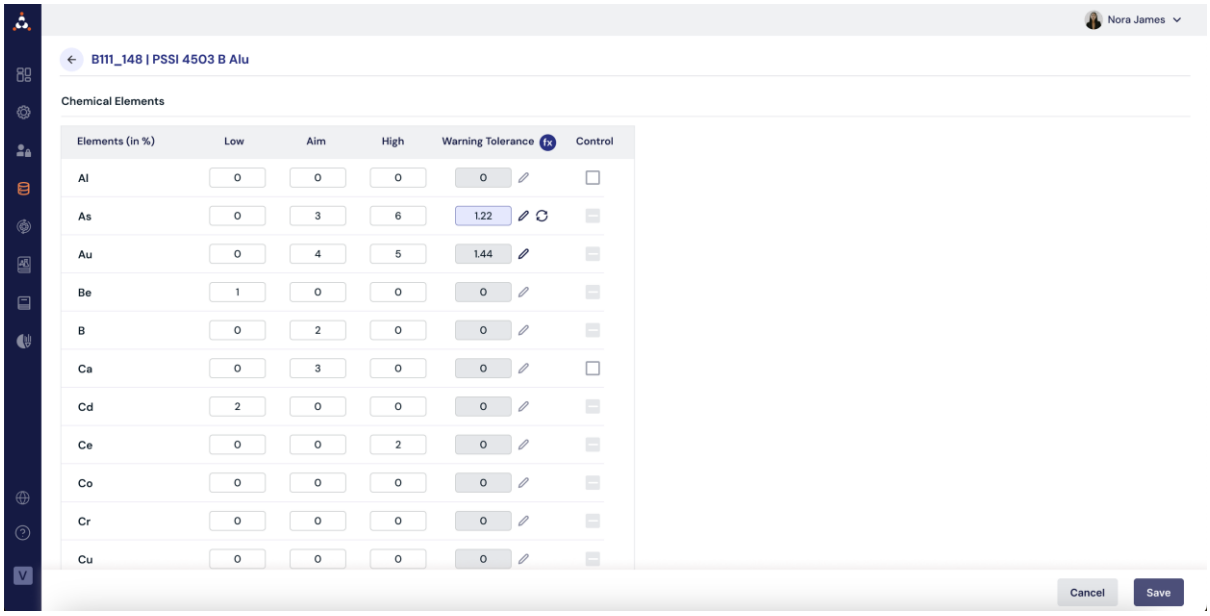
- This calculation is triggered automatically when **Low**, **Aim**, and **High** values are entered. **CR-VD-4656**
- Each warning tolerance value can be manually edited by clicking the **edit icon** next to the respective field. **CR-VD-4657**
- **If Warning Tolerance is 0 the edit icon will be disabled. Tooltip will read "Edit disabled for 0 Warning Tolerance"**
- **Value Deviation Validation:** If the user-entered value **deviates by more than ±5%** from the system-calculated value, the system shall **display a warning message** before accepting the value. "Entered value differs by more than 5% from the system-calculated value. Are you sure you want to proceed? Are you sure you want to proceed?". Once confirmed user entered value can be saved.
- Once a value is **overridden by the user**, it is highlighted with a background to indicate the change.
- **Overridden values** will display a **reset icon**, allowing users to revert them back to the **system-calculated value**.
- A **tooltip** appears on hover, explaining that the value has been **manually overridden**.
- **Default – 0**
- only integers, Max 100/ Min 0, 3 integers and Four places after decimal point

- 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 **CR-VD-4655**
    - 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 **CR-VD-4655**
  - Field Validation -
    - only integers, Max 100/ Min 0, 3 integers and Four places after decimal point
    - The sum of all *Aim* values represents a percentage-based split of elements in the material. While it is **not required to total exactly 100%**, it **must not exceed 100%**. Total value will be shown next to section heading. A validation message that "Total value of elements should be less than 100%" will be displayed **CR-VD-3979**
    - It has to be higher than Low and lower than High
- High
  - Editable and pre-populated with the existing value.
  - Mandatory - No
  - Default – 0 **CR-VD-4655**
  - 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

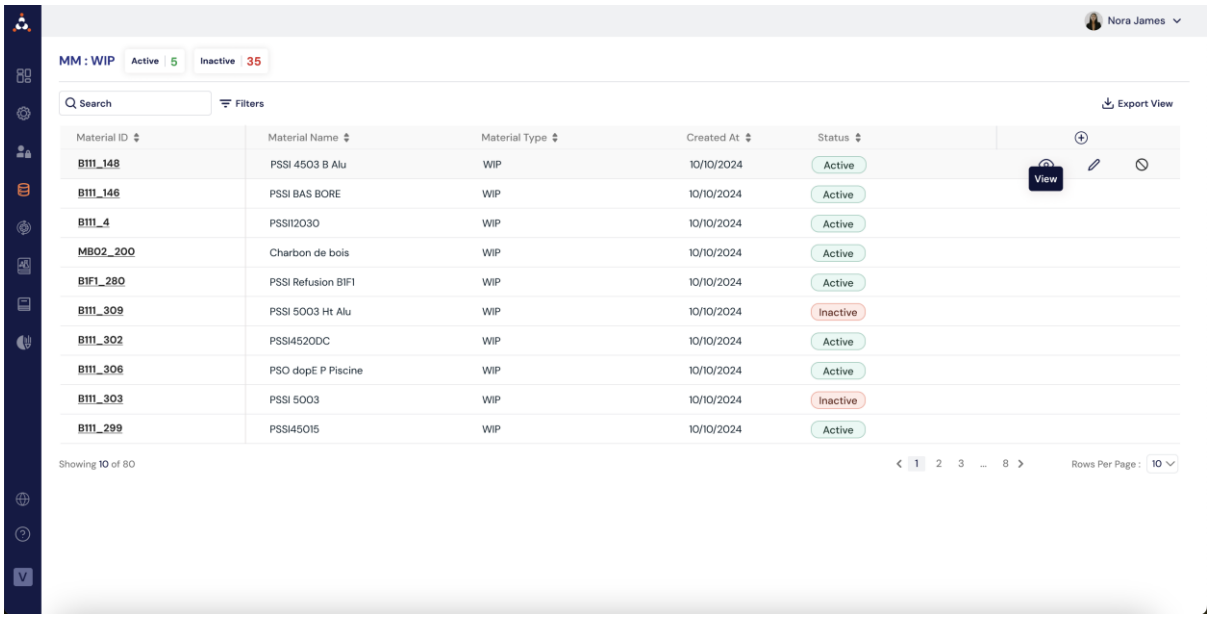
- ***Action Buttons***
  - **Save**
    - Upon saving the details, the user is redirected to the **List** page.
    - On the **list screen**:
      - Since both tab's details have been entered,
      - An **Edit** option will appear in the **action menu** for the corresponding item.
      - User can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



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.



Material Information Tab

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

CR-VD-4658

Scenario 1: ERP ID exists, but no Ops ID

- Material ID = ERP Material ID
- Material Name
- Material Type
- Status
- Date Created
- Material Description

Scenario 2: ERP ID and Ops ID exist with a one-to-one mapping

- Material ID = ERP Material ID = OPS Material ID
- Material Name
- Material Type
- Status
- Date Created
- Material Description

Scenario 3: ERP ID and Ops ID exist and are different (i.e., no one-to-one mapping)

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

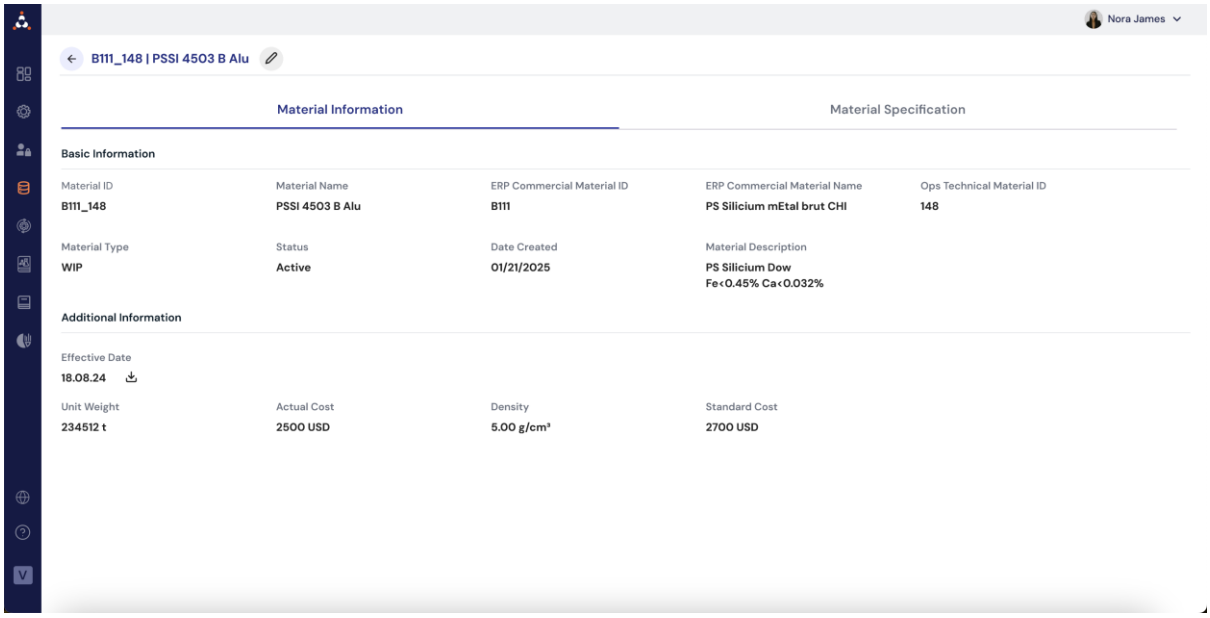
- **Effective Date**:
    - **Export Icon**:
        - Historical and future data can be viewed by downloading the CSV file using the download option.
        - The tooltip should read "Download CSV". **CR-VD-4482**
        - Downloads the record in CSV format.
        - The file must include the following headers and display the values as the following example: **CR-VD-5348**
        - Exported File Name: **"WIP_Additional_Information_DD-MM-YYYY"**

CR-VD-4489

Effective Date	Material ID	Material Name	Material Type	Available	Specifications	Density		Created By		Modified By
23/06/25	B1F2_281	PSSI Refusion B1F2	WIP	No	4	1.00 g/cm^3		superuser | superuser | Rose Danish		autosuperuser | autosuperuser | Auto Superuser

CR-VD-4654

- **Unit Weight**
- **Actual Cost**
- **Density**
- **Standard Cost**



Material Specification Tab

Chemistry, Physical specifications 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

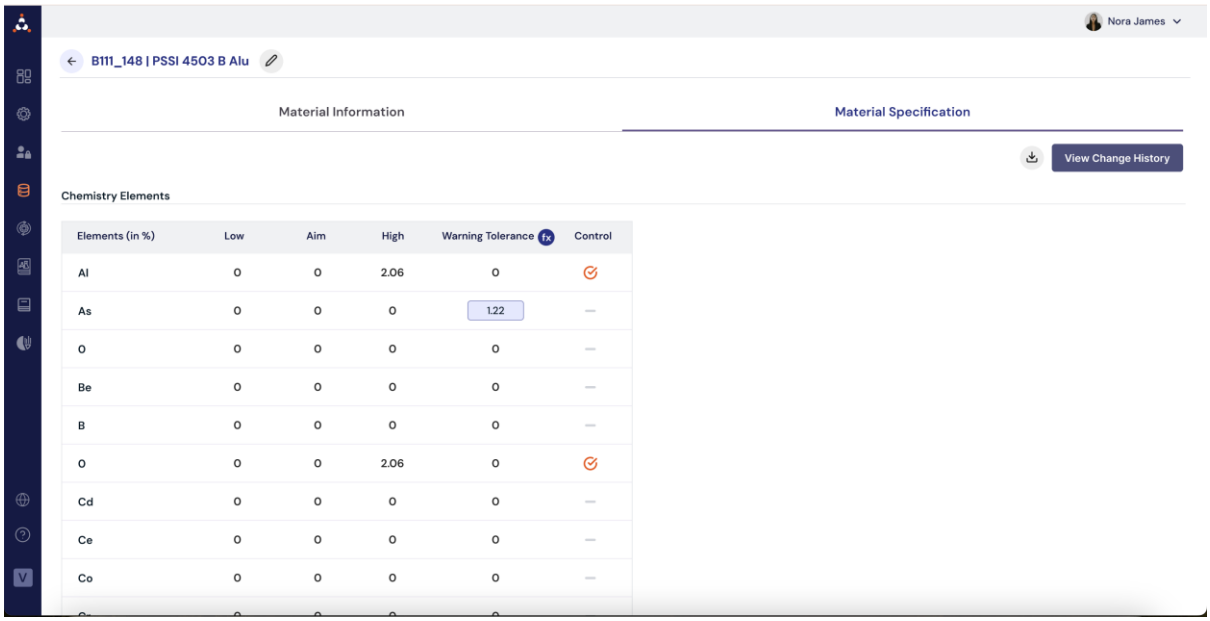
Export Specification

- Historical data can be viewed by downloading the Excel file using the download option.
- The tooltip should read “Download CSV”. **CR-VD-4482**
- Downloads the record in CSV format.
- The file must include the following headers and display the values as the following example: **CR-VD-5348**
- Exported File Name: **“WIP_MaterialSpecification_DD-MM-YYYY”** **CR-VD-4489**

Element (in %)	Element Group	Low	Aim	High	Warning Tolerance	Control	Created At				Modified At	Modified By
Al	CHE	0	8	92.975	0.0075	TRUE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
As	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Au	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Be	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
B	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Ca	CHE	1	2	3	0	TRUE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Cd	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Ce	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Co	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Cr	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Cu	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
C	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Dy	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara

Er	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Fe	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Ga	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Gd	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Ge	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Hf	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Hg	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
In	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
K	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
La	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Li	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Mg	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Mn	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Mo	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Na	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Nb	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Nd	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Ni	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Pb	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Pr	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Pt	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
P	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Re	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara

Sb	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Sc	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Se	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Si	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Sm	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Sn	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Sr	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
S	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Ta	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Te	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Ti	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
V	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
W	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Y	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Zn	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Zr	CHE	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Ash	PHY	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Moisture	PHY	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara
Volatiles	PHY	0	0	0	0	FALSE	05/06/2025 | 07:24 AM				05/06/2025 | 07:24 AM	devara | Dev ara



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". CR-VD-4482**
- Export Filename - "WIP_ChangeHistory_DD-MM-YYYY" **CR-VD-4489**