Applying Legend Items

On this page

When you create or display a Legend in a diagram or table, the adornment of its Legend Items is applied to the symbols or table rows of corresponding elements. You can define the elements to which a Legend Item should be applied by specifying one of its properties in the **Apply To** property group. Legend Items can be applied either to **Specific Elements** or to **Elements By Condition**. If you apply a Legend to a table, you can also specify the **Adorned Properties** property which defines what cells of the relevant table rows should be adorned.

> **Important**
> You can specify either the **Specific Elements** or the **Elements by Condition** property of a Legend Item, but not both.

Applying Legend Items to specific elements

You can apply a Legend Item to one or multiple specific elements as described below.
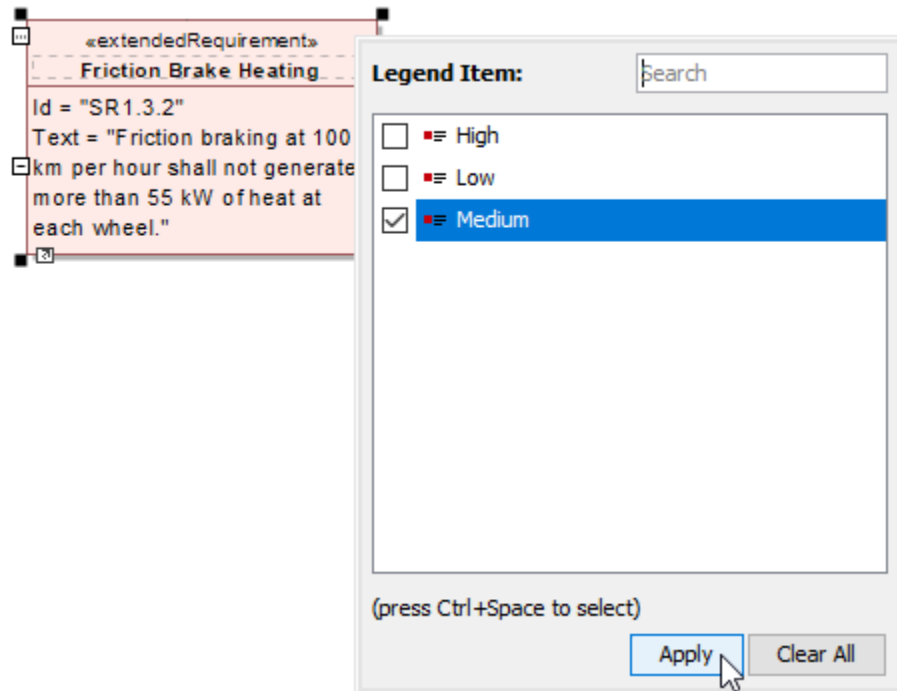
To apply a Legend Item to specific elements

1. Open the Specification window of a Legend Item you want to apply.
2. Select the property specification cell of the **Specific Elements** property, and click ⋯ .
3. On the left side of the **Select Elements** dialog, select the elements to which you want to apply the Legend Item.
4. Click ➕ to add them to the **Selected elements** area, and click **OK**.
5. Close he Specification window.

You can also apply one or multiple Legend Items to an element from its symbol.

To apply Legend Items to an element from its symbol

1. In a diagram, right-click the shape of the element to which you want to apply Legend Items, and in the menu select **Legend Item**.
2. In the open dialog, select the Legend Items you want to apply, and click the **Apply** button.

The example how to apply Legend Items from an element shape.

Applying Legend Items to elements by condition

Applying a Legend Item to **Elements by Condition** ensures that it is consistently applied to all the elements that meet the defined condition, even after you change your model.

Example

Let's say that you want to apply a Legend Item to all requirements that have a high risk level. The quickest way to do it is to create a Property Test operation. Follow the steps bellow to analyze this specific use case and define the **Elements by Condition** property for the Legend Item:

1. Open the Specification window of a Legend Item.
2. Select the specification cell of the **Elements by Condition** property, and click [...].
3. In the **Element by Condition** dialog, click [...] next to the **Element Type** box.
4. In the **Select Element Type** dialog, select the **Requirement** type, and click **OK**.
5. In the Property Test operation specification area of the **Elements by Condition** dialog, select the **risk** property and set its value to **High**.

> ⚠️ **Default options**
> By default, the **Language** is set to **StructuredExpression,** and the Property Test operation is selected in the **Elements by Condition** dialog.

6. Click **OK**, and close the Specification window.

The **Elements by Condition** dialog with the Property Test operation defined to test if Requirements have a high risk level.

After following the above steps, the Legend Item is applied to all Requirements that have the **Risk** property set to **high**. If this use case does not meet your needs, you may enable the Expert mode, and define advanced Property Test operation properties. You may also create an operation of a different type, or create several operations for a single condition, as long as it returns Boolean data type value (*true* or *false*). In addition, you can define a condition using a different **Language** setting.

Applying Legend Items to specific cells of a table

When a Legend is used in a table, you can specify not only the elements to which specific Legend Items should applied (the **Specific Elements** or **Elements By Condition** properties), but also the desired properties of these elements. In other words, you can adorn specific cells of a table instead of adorning entire table rows. To do this, use the **Adorned Properties** property of a Legend Item.

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> ⚠️ **Adorned Properties**
> The **Adorned Properties** property of a Legend Item is only effective if you use the Legend in a table.

Example

Let's say you have a Requirements Table with three columns: *Name, Text* and *Risk.*, and you want to apply two legends in that table: *Risk* and *Status.* When you create or use a Legend in a table, Legend Item adornments are normally applied to enitre table rows. So in this case, you also have to specify certain element properties (table columns) to which Legend Items of each Legend should be applied. To reproduce this spesific use case, follow these steps:

1. Create a Requirement Table with the *Name*, *Text* and *Risk* columns.
2. In the table, create a Legend to indicate the risk level of Requirements and name the Legend *Risk*.
3. Create and define the Legend Items for the *Risk* Legend by completing the following steps:
    a. Create three Legend Items indicating three possible Requirement risk levels and name them *High*, *Medium*, and *Low*.
    b. Open the Specification window of the first Legend Item.
    c. Specify the Legend Item adornment by selecting the desired **Fill Color**.
    d. Specify the **Elements by Condition** property by creating a Property Test operation and selecting the **Risk** property value the Legend Item represents.
    e. Specify **Adorned Properties** property by selecting the **Risk** property as its value.
    f. Repeat the steps from b. to e. with the rest of the Legend Items.
4. In the same table, create a legend intended to show the status of Requirements and name the Legend *Status*.
5. Create and define the Legend Items for the *Status* Legend by completing the following steps:
    a. Create four Legend Items indicating four possible Requirement status values and name them *Closed*, *Approved*, *Disapproved* and *In Progress*.
    b. Open the Specification window of the first Legend Item.
    c. Specify the Legend Item adornment by selecting the desired **Fill Color**.
    d. Specify the **Elements by Condition** property by creating a Property Test operation and selecting the **Status** property value the Legend Item represents.
    e. Specify **Adorned Properties** property by selecting the **Name** and **Text** properties as its values.
    f. Repeat the steps from b. to e. with the rest of the Legend Items.

After following the above steps, you have a Requirements Table with the *Status* and *Risk* Legends applied to it. The Legend Items of both Legends do not conflict because they are applied to different columns of the table, as shown below.

| Risk: | ■ High | □ Medium | ■ Low | Status: | □ Closed | ■ Approved | ■ Disapproved | □ In Progress |

#	△ Name	Text	Risk
1	▣ SR1.1 Vehicle Mass	The total vehicle mass shall not exceed 1500 Kg.	Low
2	▣ SR1.2 Regenerative Braking	When braking, the electric motor shall switch to generator mode. The wheels shall transfer kinetic energy via the drivetrain to the generator. Generator resistance produced from the electricity created shall slow the vehicle.	
3	▣ SR1.3.1 Stopping Distance	The vehicle shall completely stop from 100 km per hour in less than 30 meters.	High
4	▣ SR1.3.2 Friction Brake Heating	Friction braking at 100 km per hour shall not generate more than 55 kW of heat at each wheel.	High
5	▣ SR1.4 ACC Brake	ACC shall bring the vehicle to a complete stop if the barrier appears.	High
6	Category 1 of ▣ SR1.5 Ultra Low Emission Vehicle	The vehicle shall emit less than 50 grams of carbon dioxide (CO_2) per kilometre driven.	Low
7	▣ SR1.6.1 Full charge mode	The vehicle shall drive at least 200 km on full charge electric-only propulsion mode and shall be charged in less than 150 minutes.	Low
8	▣ SR1.6.2 Quick charge mode	The vehicle should be charged in less than 30 minutes and it should be possible to drive at least 70 km.	Medium

The figure shows a Requirement Table with the *Risk* and *Status* Legends applied to it.
The Legend Items of each Legend are applied to different columns of a table.

Related pages

- Specifying Legend Items
  - Specifying Legend Item adornment