

## Helpful Tips

Some of the most demanding tasks to populate and upload Master Data is the correct preparation of the data source, as well as the relationships between the entities within the Excel sheets. Due to the sheer number of possible objects that can be loaded through **Master Data Packages**, the scenarios used to create and load a template file into the system without any problems are too varied to be properly described, so here are a few hints and tips that any user may take into account when starting out:

### Source data

To enable a seamless transition of your source data, follow these rules:

- Prepare the source data in an Excel spreadsheet, using columns matching the already existing columns in the Master Data template. If there are columns in the Master Data template that you do not want to populate, insert blank columns in your source spreadsheet in the same index of those same columns to facilitate copy and paste operations.
- Many entities use values from the `LookupTableValues` sheet. Prepare your **Lookup Tables** in advance so that the values are available to be inserted into the entity sheets.
- Concerning **Smart Tables**, updating values is only allowed for the cases where the property `Multiple Values for Same Key` is defined as `false`.

### Characters

Follow these rules to avoid problems with character handling:

- Trim all leading and lagging spaces from the labels of any data element.
- Use the **Name** and **Description** columns when generating new entities.
- Regarding entity names, try to use a short and consistent format. Avoid special characters (@, &, #, !, , among others) in the actual name of the entity in order to maximize compatibility. If it is essential to use special characters, use them in the **Description** field.
- The **Data Collection Limit Sets** are populated as a collection of concatenated strings of several fields from the parameters. Use a formula to concatenate the fields to improve data entry and avoid typos.

- Parameter string: `=CONCATENATE("Parameter["&B15,"] LimitType[Absolute] LowerErrorLimit["&L15,"] LowerWarningLimit[Null] Target["&M15,"] UpperWarningLimit[Null] UpperErrorLimit["&N15,"])"`

<code>=CONCATENATE("Parameter["&amp;B15,"] LimitType[Absolute] LowerErrorLimit["&amp;L15,"] LowerWarningLimit[Null] Target["&amp;M15,"] UpperWarningLimit[Null] UpperErrorLimit["&amp;N15,"])"</code>	
Parameter[Item #14 56-C7 PIN HEIGHT 2X .25 +/- .01] LimitType[Absolute] LowerErrorLimit[0.24] LowerWarningLimit[Null] Target[0.25] UpperWarningLimit[Null] UpperErrorLimit[0.26]	Parameter[Item #14 56-C7 PIN HEIGHT 2X .25 +/- .01] LimitType[Absolute] LowerErrorLimit[0.24] LowerWarningLimit[Null] Target[0.25] UpperWarningLimit[Null] UpperErrorLimit[0.26] Parameter[Item #14 56-C7 PIN HEIGHT 2X .25 +/- .01] LimitType[Absolute] LowerErrorLimit[0.24] LowerWarningLimit[Null] Target[0.25] UpperWarningLimit[Null] UpperErrorLimit[0.26]

- Limit Set string collection: `=CONCATENATE(P15,";"&P16)`

Parameter[Item #14 56-C7 PIN HEIGHT 2X .25 +/- .01] LimitType[Absolute] LowerErrorLimit[0.24] LowerWarningLimit[Null] Target[0.25] UpperWarningLimit[Null] UpperErrorLimit[0.26]	
Parameter[Item #14 56-C7 PIN HEIGHT 2X .25 +/- .01] LimitType[Absolute] LowerErrorLimit[0.24] LowerWarningLimit[Null] Target[0.25] UpperWarningLimit[Null] UpperErrorLimit[0.26]	<code>=CONCATENATE(P15,";"&amp;P16)</code>

### Sequence

- Be mindful of the modeling sequence and fill in the sheets that have dependencies in the proper sequence and keep the sheets together so you can navigate easily in the file, for example:
  - **Calendar, ShiftDefinition** and **ShiftDefinitionShift**
  - **Facility** and **Area**
  - **Service** and **Resource**
  - **Checklist, ChecklistItems** and **ChecklistParameters**
  - **Step, Flow, Flow structure**
  - **Product, BOM, BOMProducts**
  - **DataCollection, DataCollectionParameters, DataCollectionLimitSet**
- **Data Collections, Checklist** and **Protocols** use **Parameters**, so prepare the **Parameters** sheet before working on the mentioned entities