



Intergraph Smart Reference Data

Module - 1 Create Commodity Codes

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SECTION 1

Lab 1 - Create Commodity Code

Objective

In this lesson, you will learn how to create a new commodity code in Smart Reference Data Plus.

In detail, you will learn how to:

1. Create commodity rules
2. Add tables to a commodity rule
3. Assign commodity keys to the tables
4. Create commodity table group and assign commodity rule
5. Add commodity parts
6. Add table details and generate commodity codes

Lab Overview

This tutorial explains how to create a commodity code in Smart Reference Data by means of a table detail-based commodity code.

Scenario

As a Smart Reference Data user, I want to create a commodity code **VBAAABAZABBF** that is generated for the part **B**.

Prerequisites

For this session, you must know how to log in to the software with the appropriate access rights from your administrator. You also need to have a consolidated knowledge about Smart Materials and Smart Reference Data basic functionality, which means you should be familiar with general screen handling in the software.

Exercises

Commodity Attributes

Commodity attribute tables and commodity rules are the basis for all table detail based or rule-based commodity codes.

Before we can start to create commodity codes, we must define commodity attributes or properties. The property values are stored in tables, where a table identifies the property, for example, design standard or material grade.

A table can be divided into groups to clearly arrange the property values. For example, if you have a table called Materials, you could arrange the details in groups like steel materials, plastic materials, and so forth. The table details represent the property values, which are used to create the commodity codes and to describe the components.

Defining the commodity properties in this manner ensures that a specific property is always used in the same way, because the list of available entries is restricted to the pre-defined values. This is crucial for quick and clear identification of components.

For example, when thinking about a property called Material, one user might say 'Carbon Steel', while another user says 'C Steel'. Even if both are talking about the same thing, Smart Reference Data is not able to understand that both descriptions are identical.

Task 1: Create Commodity Rules

1. Go to *Commodity/Ident Management* screen in SRD (on page 11).
2. In the drop-down list at the top, select **Commodity Rules**.
3. Click **Add** and in the **Rule** box, type **P_VLV_W_OP**.

Properties	
Properties: Commodity Rule	
<div> <div>01 Description</div> <div> <div>Rule</div> <div>Short Description</div> <div>Description</div> </div> </div>	
	<div>P_VLV_W_OP</div> <div>Valves w. Operator</div> <div>Valve with Operator</div>
<div> <div>02 Behavior</div> <div> <div>Shrink CC ?</div> <div>Ctrl</div> <div>CC exists</div> </div> </div>	
	<div>Y</div> <div>1</div> <div>Y</div>
<div>Description</div> <div>Long description for this rule.</div>	
Record owner: SDB	
Close	

4. (Optional) Complete the other properties for the new commodity rule.

Commodity Rules

Commodity rules are used to simplify commodity code creation and to make sure that commodity codes of a commodity group and part are always created in the same way.

Task 2: Add tables to a commodity rule





1. Double-click the **P_VLV_W_OP** commodity rule.
2. Click **Edit grid**.
3. Click **Add row** , and select **Table Name P_ALIAS** from the LOV.
4. Similarly, add rest of the tables as shown in the following figure and click **Save grid** .
5. Click **Read-only grid** .


	Table Name	* Required	* Short	* Long	* Multi Select	Spec Template	Options	* Ctrl
1	P_ALIAS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1
2	P_ALIAS_TRIM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1
3	P_DIM_STD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1
4	P_END_PREP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1
5	P_MATERIAL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1
6	P_MAT_SYSTEM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1
7	P_RATING	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1
8	P_SYSTEM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1
9	P_VLV_BODY_TYPE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1
10	P_VLV_OPERATOR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Only	1

Commodity Keys










A commodity code defines the structure of the commodity code

Task 3: Assign commodity keys to the tables

1. Right click the P_VLV_W_OP commodity rule and then click **Manage Commodity Keys**.
2. In the **Commodity Keys** grid, click **Edit grid**.
3. Click **Add row** , and select tables from the **Table Name** pane using the LOV.

NOTE Use  to view the tables. Select **Table Names Count** and then drag the tables to the **Commodity Keys** grid. If you are dragging **P_DIM_STD** with the Table Names Count as 3, you will see three tables with **P_DIM_STD** in the **Commodity Key** grid.

4. Add the following commodity keys as shown and click **Save grid** .

Grid: Commodity Keys        Sort  - 

	Digit Id	* Table Name	* Ins Char	Ctrl	*
1	1	M_COMMODITY_GROUPS		1	
2	2	M_PARTS		1	
3	3	P_ALIAS		1	
4	4	P_ALIAS_TRIM		1	
5	5	P_DIM_STD		1	
6	6	P_SYSTEM		1	
7	7	P_MATERIAL		1	
8	8	P_MAT_SYSTEM		1	
9	9	P_RATING		1	
10	10	P_VLV_BODY_TYPE		1	
11	11	P_VLV_OPERATOR		1	
12	12	P_END_PREP		1	



5. Click **Read-only grid** .

The above rule generates a code with 12 characters. Each character represents the value of the table details based on the commodity keys defined for the rule.



What would you do if you want to generate a code for which the software should use two characters of P_MATERIAL commodity key?

Define commodity layout

1. On the **Layout Management** dialog box, select a language in the **NLS** box.
2. Click the **Selection list**  to select a control status in the **Ctrl** cell.
3. Click the **Selection list**  to select attributes or tables in the **Short Layout** and **Long Layout** cells.

The entries are displayed like:



#<attribute or table name>_short# (in the **Short Layout** box)

#<attribute or table name>_long# (in the **Long Layout** box)

Commodity Group

The Commodity Group can be defined as the first classification level for bulk material.

Task 4: Create commodity table group and assign commodity rule

1. From the Data: **Explorer** drop-down, select **Commodity Group**.
2. Click **Add**  and then in the **Group Code** box, type **VBB**.
3. Click **Save grid** .


The newly added commodity group is displayed in the tree view.

Commodity Part

The Commodity Part can be defined as the second classification level of bulk material. In other words, it is a subdivision of the commodity group. Here, you can enter more explicitly the types of pipe (or other material) you want to define.

Task 5: Add commodity parts

1. Double-click a commodity group to open the grid.
2. Click **Edit grid**.
3. Click **Add row**.
4. In the new row, type **Part Code** as **B** for the new part.



 **NOTE** Rule is automatically populated as commodity group is based on the rule.

5. In the **Rule Code** box, click , and then select P_VLV_W_OP.

Commodity Codes

The Commodity Code can be defined as the third level for bulk material. The commodity codes identify and describe the components with all its size-independent properties. For example, commodity code properties are material, dimensional standard, end preparation, and so forth. The commodity code is an alphanumeric string that is built per user-definable rules. Each character represents a specific property of the part.

Task 6: Add table details and generate commodity codes

1. From the **Data Explorer** drop-down, select **Commodity Group/Part/Commodity Code**.
2. Expand **VBB.Ball Valves** and double click the commodity part **B**.
3. Click **Edit** grid.
4. Click **Add** row.
5. In the new row, enter the following table details for the table names:
 - P_ALIAS - AAA
 - P_ALIAS_TRIM - AAA
 - P_DIM_STD - AA
 - P_SYSTEM - B
 - P_MATERIAL - AAA
 - P_MAT_SYSTEM - Z
 - P_RATING - A
 - P_VLV_BODY_TYPE - B
 - P_VLV_OPERATOR - B
 - P_END_PREP - FJ
6. Click **Save grid** .
7. Click **Read-only grid**  to set the grid back to read-only mode.

Commodity code **VBAAABAZABBF** is now generated. The following table show how each character of the code is represented:

Commodity Code Generated	Character	Digit ID	Table Name	Table Detail
VBAAABAZABBF	V	1	M_COMMODITY_GROUP S	VBB
	B	2	M_PARTS	B
	A	3	P_ALIAS	AAA
	A	4	P_ALIAS_TRIM	AAA
	A	5	P_DIM_STD	AA
	B	6	P_SYSTEM	B
	A	7	P_MATERIAL	AAA
	Z	8	P_MAT_SYSTEM	Z
	A	9	P_RATING	A

Commodity Code Generated	Character	Digit ID	Table Name	Table Detail
	B	10	P_VLV_BODY_TYPE	B
	B	11	P_VLV_OPERATOR	B
	F	12	P_END_PREP	FJ



Can you guess what will be the commodity code, if you add another P_VLV_BODY_TYPE key with the value Z?

Summary

In this tutorial, you learned how to:

1. Create a commodity rule
2. Add tables to a commodity rule
3. Assign commodity keys to the tables
4. Create commodity table group and assign commodity rule
5. Add commodity parts
6. Add table details and generate commodity codes

Answer key for the high-level steps

Go to Commodity/Ident Management screen in SRD

Answer Key: Click **SRD > Component Manager > Commodity/Ident Management**.