

Siemens PLM Software

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User Guide

IMM CATIA Integration

Siemens PLM Software

On behalf of Sphera Solutions GmbH and its subsidiaries

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List of Acronyms

GUI	Graphical User Interface
IMM	Integrated Material Management
PDM	Product Data Management (for instance Teamcenter)
TC	Teamcenter
TCIC	Teamcenter Integration for CATIA
UI	User Interface

Introduction

The **I**ntegrated **M**aterial **M**anagement is a complete software that provides interactive and user-friendly interfaces as well as a bunch of functionalities that allow managing the materials and all related objects both from Teamcenter and CATIA.

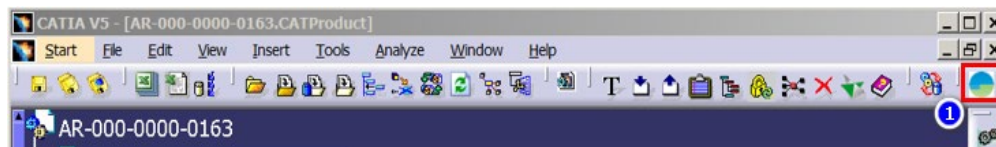
This user guide document will go through the distinctive features and capabilities of **I**ntegrated **M**aterial **M**anagement (**IMM**) **CATIA** integration.

1. Managing Materials in CATIA

Integrated Material Management provides a module for CATIA system, to allow searching and assigning materials to a Part, more specifically assign a material to each solid body of a CATIA Part.

1.1. Access IMM from CATIA

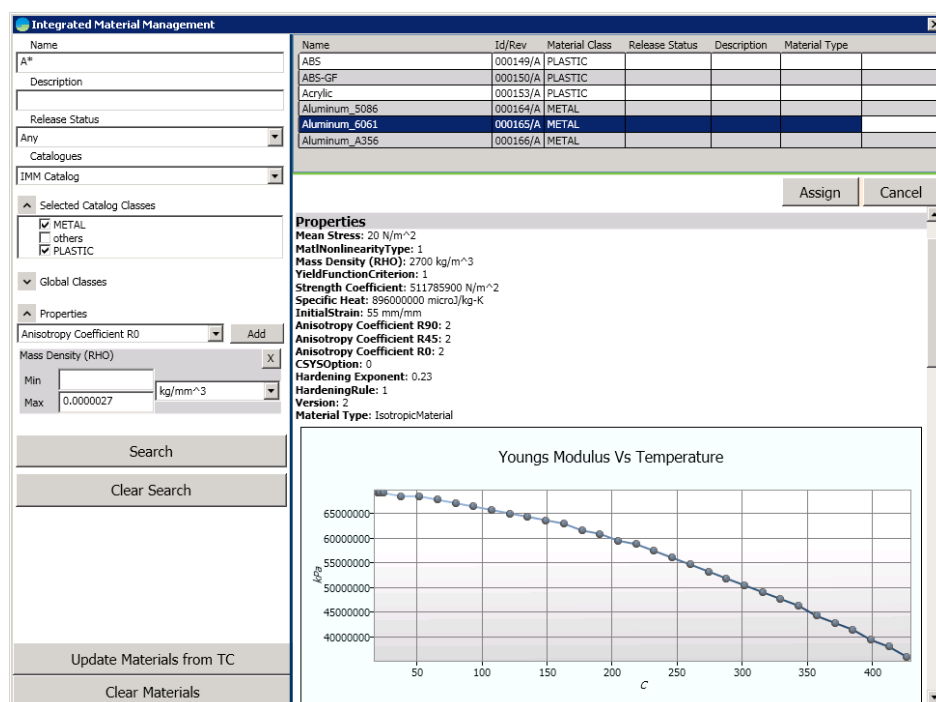
To display the IMM UI in CATIA, press the IMM button (1) in CATIA Toolbar. If it is not present in the toolbar, check and add it by customizing the toolbar.



1.2. Search for materials in CATIA

To search for materials:

1. Configure the search criteria in the left part of CATIA **IMM** user interface like shown below.
2. Press the **Search** button.
3. The results of the search will be displayed on the top right part of IMM window.
4. Select row by row each **material revision** to check if it fits the needs.
5. Selecting one material revision will display all its **details** and **properties** in the bottom right part of IMM window.

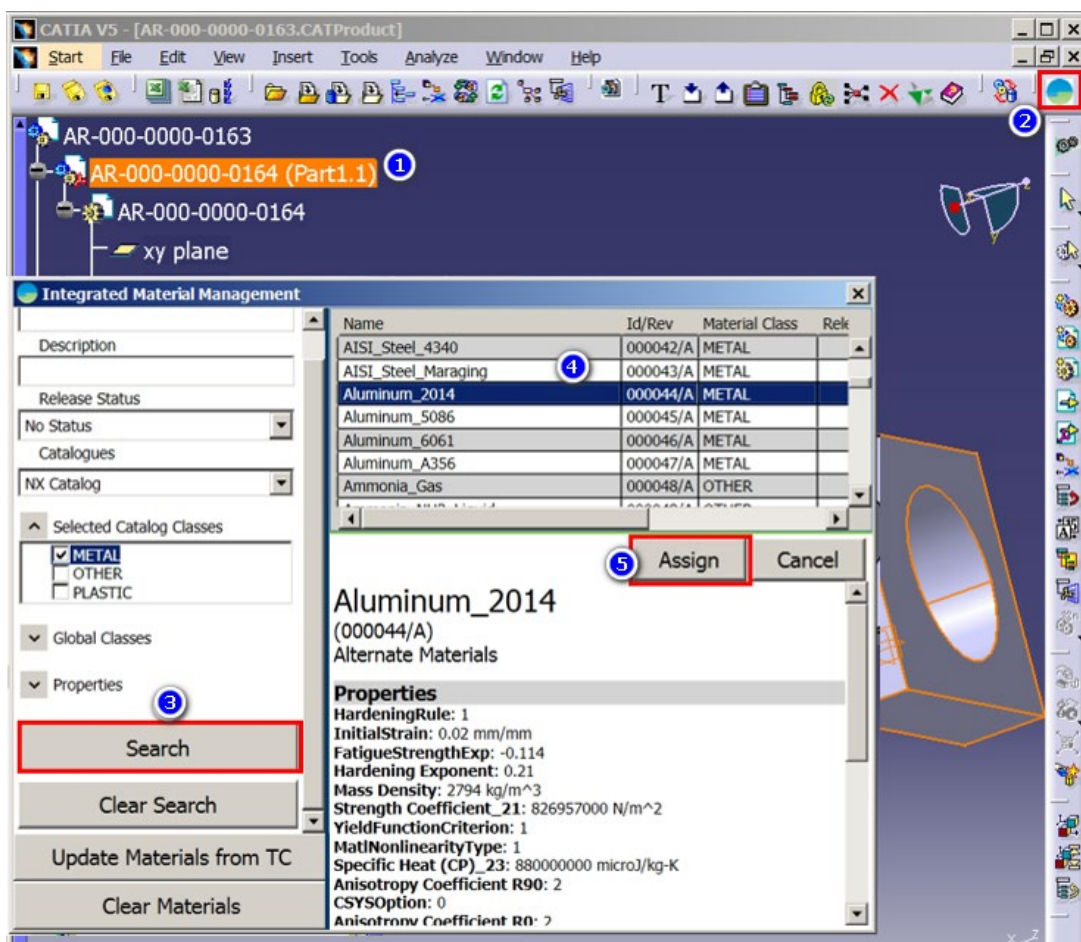


Notes: The CATIA **Session Units** object is required to map the units between TC and CATIA

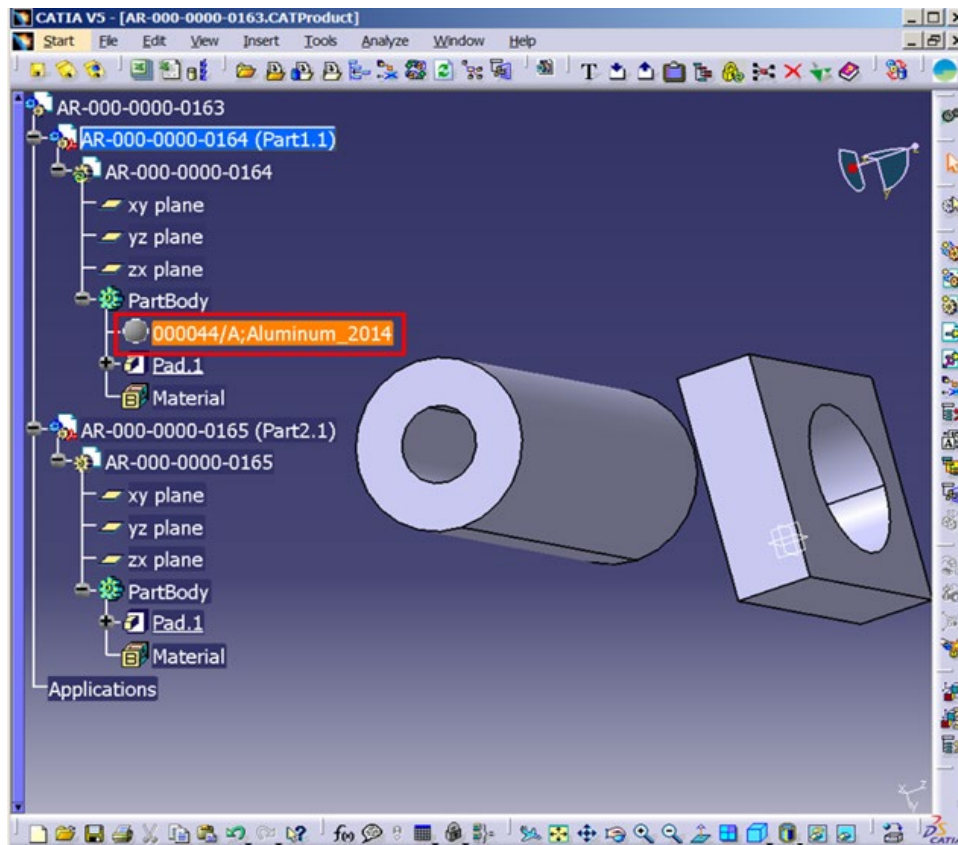
1.3. Assign a Material to a Part in CATIA

To assign a material to a part in CATIA:

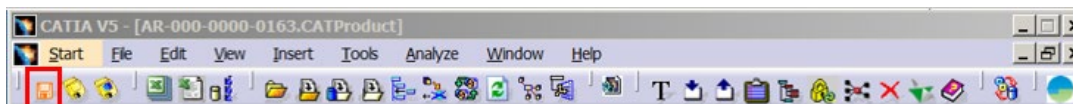
1. Select one or multiple CATParts or Part-bodies in CATIA.
2. Start IMM from Catia.
3. Press the **Search** button after configuring search criteria.
4. Select the **material revision** target from the top right panel in IMM window.
5. Press the **Assign** button.



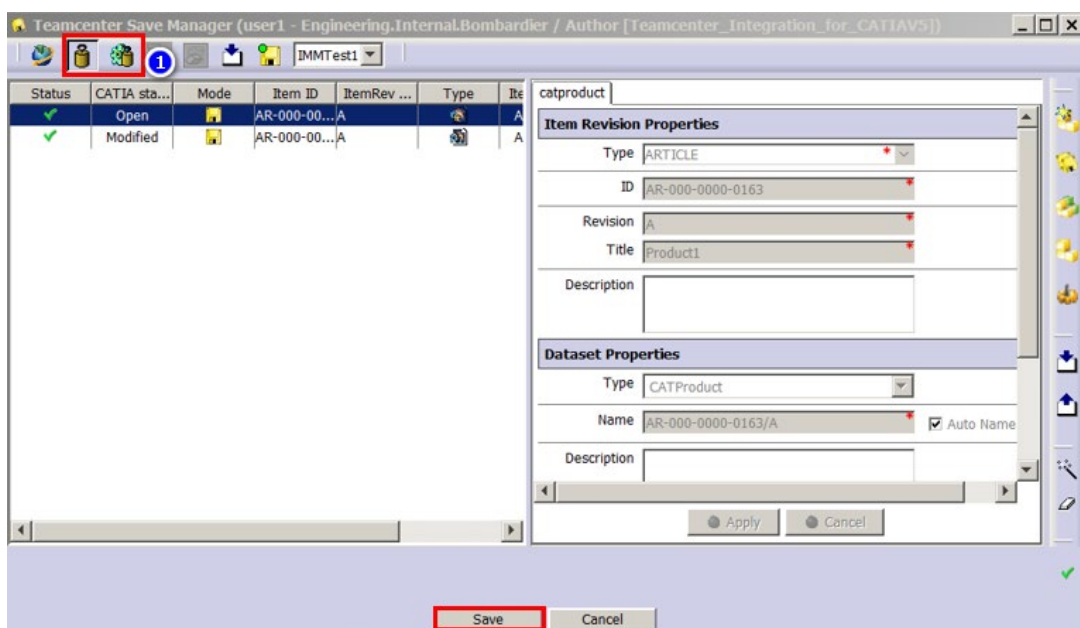
6. Check that a CATmaterial is created under the PartBody of each of the selected CATParts.



7. To effectively **create a relation in TC** between the **assigned material revision** and the selected **CATParts**, **press the TCIC Save button** from the toolbar.



8. If the CATPart is not already saved to TC, fill with the desired part properties on right panel then save. If the CATPart is already in TC proceed directly with **Save**

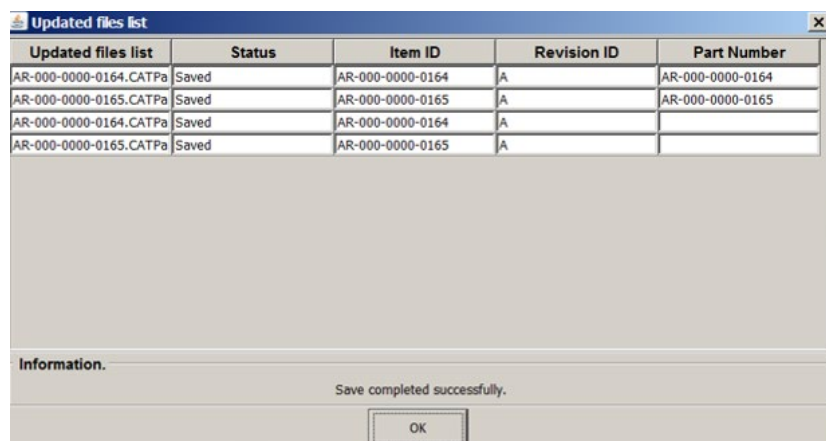


Adding a Material updates the **catia_model_attribute** form in TC from where the Weight will be populated to the material revision.

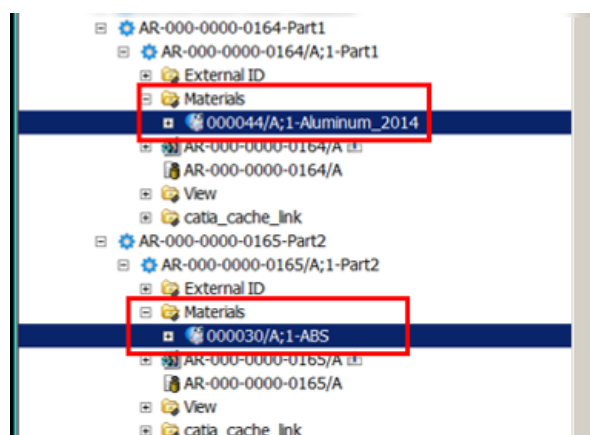
Note: To be able to **calculate the part mass:**

- ✓ The Mass buttons shown in the picture above and depicted by **(1)** should be enabled (kept pressed)
- ✓ The material property **“Material Type”** should be defined on the Material Revision and should be mapped properly to the CATMaterial Material Type property.
- ✓ The material property **“Mass Density”** should be defined on the Material Revision and should be mapped properly to the CATMaterial Mass Density property.
- ✓ If the Mass density is defined and the part has a body volume, then the mass will be calculated for each body, based on its material density, after saving to TC. The global mass value of the CATPart is set to the **weight** attribute of the **catia_model_attributes** form. The individual body mass value is calculated and set to the **mat1mass** attribute of the **Mat1UsesMaterial** relation in TC between the part revision and the corresponding material revision assigned to this body.

9. If the relation creation is enabled and the Save action was successful, the part list is automatically updated:



The **material revision** will be displayed in TC in the pseudo-folder **Materials** under the part.



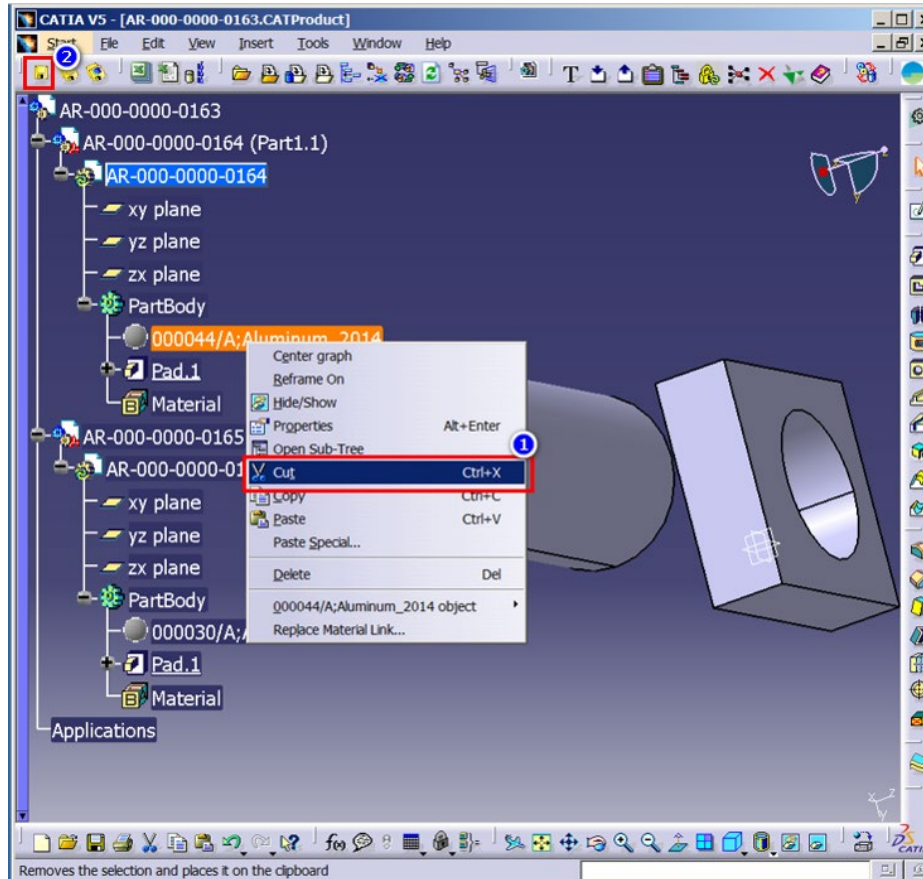
Note:

- ✓ With **TCIC 11.0.5.2** assigning **multiple Materials** to **multiple bodies** under the a CATPart, is supported. And each material revision will be attached to the part revision in Teamcenter after Saving from TCIC menu in CATIA.

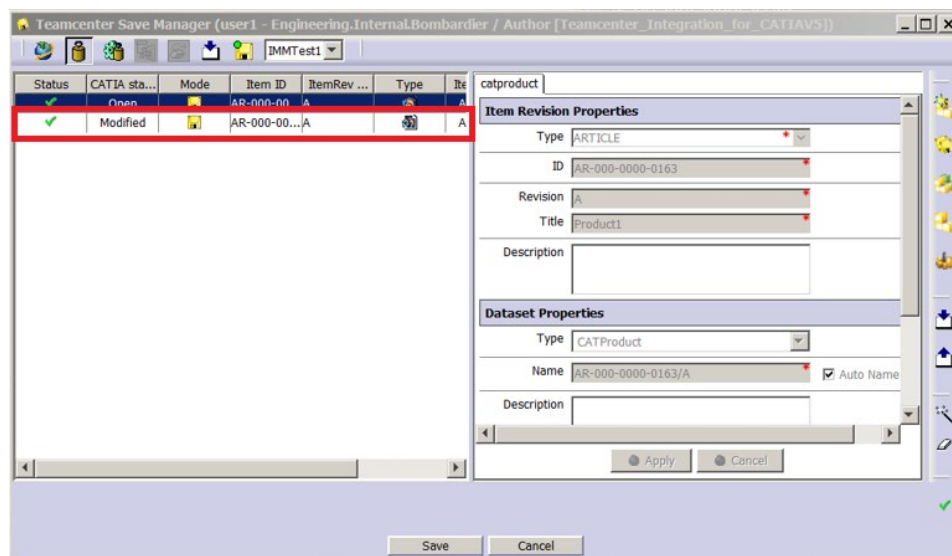
1.4. Delete a material from a part in CATIA

To delete a material to a part in CATIA:

1. Select the material you want to remove from the part or the body in CATIA and cut it:
2. Press Save:



3. The material is deleted and then the part is modified:



4. The material is deleted from the part in CATIA and it is no longer displayed in the pseudo-folder Materials under the part in TC:

