ADS V4
User's Manual
Part V
Materials Dataset

Rev A

May 29, 2020

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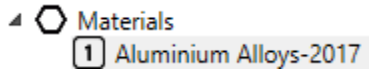
1. Introduction

1.1. The root node Materials

The Material dataset is created from the root node **Materials**

Contextual Menu :	
Right click :	
New Material	To create a new Material dataset in the current session
Open Material	To load a Material dataset in the current session
Duplicate Material	To duplicate a Material dataset and load it in the current session

Several Material datasets may be loaded in the same session

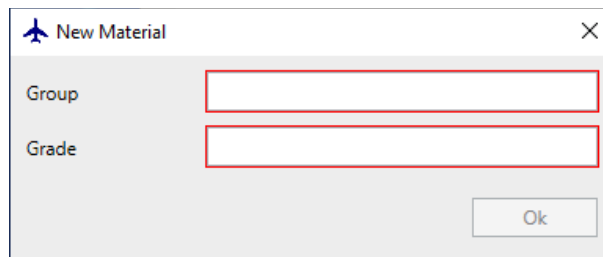|	
1 …	The Material datasets that will be loaded in the current session
2 …	
3 …	
4 …	

1.2.   To Create a new material dataset in the current session

Commands :
Right click :
New Material	To create a new Material dataset in the current session

1. Enter
    a) The name of the Group (Aluminium Alloys)
    b) The name of the Grade (2017)
2. Click on OK

The New Material dataset is displayed in the TreeView
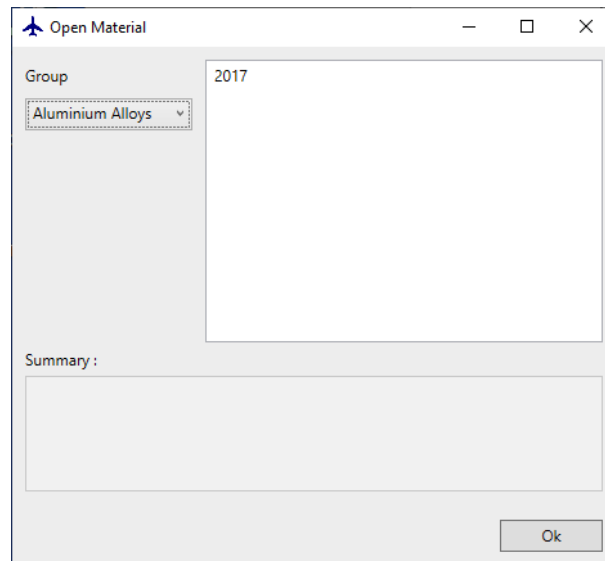
1.3. To Load a material dataset in the current session

Commands :	
Right click :	
Open Material	To load a Material dataset in the current session

1. Select
   a) Group

   to filter the list

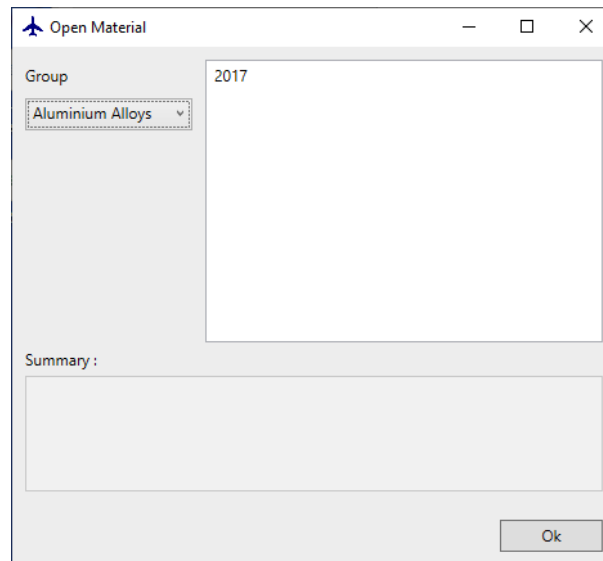2. Double click on the name of the Material dataset **or** click on the name then click on OK

The selected Material dataset is displayed in the TreeView

1.4. To duplicate a material dataset and load it in the current session

Commands :	
Right click :	
Duplicate Material	To duplicate a Material dataset and load it in the current session

1. Select
    a) Group

   to filter the list

2. Double click on the name of the Material dataset **or** click on the name then click on OK

One copy of the selected Material dataset is displayed in the TreeView

2. Description

Root branch of the current dataset. The header is the concatenation of the Group Name and the Grade.

Properties :		
General	Reference	Aluminum Alloys-2017
	Group	Aluminum Alloys
	Grade	2017
Mechanical Properties	Density	Density
	Poisson's Ratio	Poisson's Ratio, describes the expansion or contraction of a material in directions perpendicular to the direction of loading
	Shear Modulus	Shear Modulus is defined as the ratio of shear stress to the shear strain
	Young's Modulus	Young's Modulus is defined as the ratio of uniaxial stress to the strain
Strength Properties	Tensile Strength	Tensile Strength, maximum stress that a material can withstand while being stretched or pulled before breaking
	Yield Strength	Yield Strength, the stress at which the material begins to deform plastically

Commands :		
Right click :		
Duplicate		To duplicate the current dataset
Remove		To remove the current dataset from the current session
Save		To save the current dataset
Save As		To save the current dataset and change its name