

Using the Periodic Table in MatDeck

There is the Periodic Table toolbox in MatDeck, which can be started from the Toolbox menu. The Periodic Table contains various data about chemical elements. Furthermore, with the GUI users can select which value to use and insert as a variable directly in the document text, or in MatDeck Script code. The user can define variable names, as well. The image below shows the Periodic Table GUI.

MatDeck

Name	Atomic Number	Symbol	Atomic weight	Geochemical class	Electronic configuration	Group	Select property	Value of property
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	period	<input type="text"/>
<input type="checkbox"/> name <input type="checkbox"/> Add	<input type="checkbox"/> an <input type="checkbox"/> Add	<input type="checkbox"/> sym <input type="checkbox"/> Add	<input type="checkbox"/> aweight <input type="checkbox"/> Add	<input type="checkbox"/> geoc <input type="checkbox"/> Add	<input type="checkbox"/> el <input type="checkbox"/> Add	<input type="checkbox"/> gr <input type="checkbox"/> Add	<input type="checkbox"/> var <input type="checkbox"/> Add	<input type="button" value="Insert variable"/>

Here are some example of its use :

- Melting point of Tin is `Tin_melting_point:=505.1000000000002`
- Discoverers of Radium are: `_discoverers:="Pierre and Marie Curie"`
- Actinium was discovered in `_discovery_year:=1899`

We can add variables directly in MatDeck Script, and use them in later programs. For example, we can take the atomic weight of Hydrogen and Oxygen from Periodic Table.

```
1 Hweight:=1.008
2 Oweight:=15.999
```

Then, we can determine the molecular mass of water (H₂O).

$$\text{Hweight} \cdot 2 + \text{Oweight} = 18.015$$