

4.9.4**Applicable User Manual: v4.9.0****Modifications:**

- Set the default ray number value to 10000 instead of 1 to avoid misunderstandings.
- Improve error message if license is missing
- Python script to generate fort.93 file used as "H5 temperature" input of Generate_DCK delivered.

4.9.3**Applicable User Manual: v4.9.0****Modifications:**

- VOTAN interface - Consideration of cutters and removal of UPDATE MAXEOL subroutine

4.9.2P2**Applicable User Manual: v4.9.0**

No modifications

4.9.2P1**Applicable User Manual: v4.9.0**

No modifications

4.9.2**Applicable User Manual: v4.9.0**

No modifications

4.9.1**Applicable User Manual: v4.9.0**

No modifications

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Modifications :

- The bounds of Inactive Impingements Budget of the mtf.log file are adjustable in the “Compute MTF” and “Mass Transfer Factor” modules of the processing tab.
Warning: the processing files .sysprc done with a previous version should be rebuild from zero to be safe.

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Robustness improvement of VOTAN solver interface written in DCK file:

- Correction of the view factor matrix VFile when no views on space node;
- Define limitation VOTAN does not take multimaterial into account;
- VOTAN init file contained unknown materials;
- Value max number of iterations calculation;
- Correction of the deposited mass filling from VOTAN ASCII file;
- Take $W_0 = 0$ % into account;
- Difference between TIMEND of DCK and end time from temperature file.

Outgassing module:

- Add the unit mg/m^2 both in processing and post-processing tabs;
- Detection of materials which have the same name in material file.

Systema framework:

- Bug fix in the SDS/HDF5 library which could pose problems in some cases.

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Outgassing module:

- The possibility to have distinct sides Outgassing properties has been added. It allows to put different materials or temperatures on the two sides of a shape;
- The possibility to input multiple materials on one shape has been added. It allows to load a material composed itself of several materials;
- The possibility to take the bake out into account of a material with a new block in the processing diagram.

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Outgassing module:

- The "Compute MTF" module has been updated with a new text output file containing a table of node number, node center coordinates, node area. This file is deactivated by default.

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Outgassing module:

- The computation of Ambient Scattering is included. The following parameters can be defined in the processing:
 - o Ambient density,
 - o Ambient velocity,
 - o Ambient temperature,
 - o Ambient molecules molar mass,
 - o Ambient molecules diameters,

- Outgassed molecules molar mass,
- Outgassed molecules diameters.

The mass transfer factors include the calculation of the return flux induced by collisions with the ambient atmosphere;

- Allow deactivation of material file and dck output file in OtgPrepro module;
- Add material content checking. Warning messages are added in the mass transfer factor module;
- Addition of two modules allowing to perform the mass transfer factor computation and the solver input file generation separately;
- The user can choose deposited mass density unit among kg/m², g/cm², mg/cm², µg/cm² and ng/cm². A conversion at post-processing level is also possible;
- Creation of Outgassing post-processing.

Outgassing solver:

- No changes have been made, except a memory consumption reduction.

Systema modeller:

- Line and point help items can be selected in the 3D viewer;
- An advanced search is available to find shapes with defined applicative properties;
- CAD files can be opened and simplified when Systema installation directory is in read-only. Log files generated by the Elysium CAD Library at the download and during simplification are written in the default temporary file of the operating system.

Systema meshing:

- It is possible to **select only the visible face** of a mesh.

Systema processing:

- It is possible to edit in the embedded text editor the material file (right click, then choose edit input file).

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First OUTGASSING V4 release.