#### Insul release notes

### Release 9.0.23 January 2021

- \* Fixed install bug from 9.0.22
- \* Updated calculation of C, Ctr corrections
- \* Improved handling of user-chosen locations for materials files on Mac
- \* Fixed window-resize crash on Mac
- \* Added Cavity Width to the auto-generated system description
- \* Minor interface improvements for Rainfall, Floor cover and Glazing tabs
- \* Added alert for modelling porous facings with very high flow resistivity
- \* Improved detailing of Leaks on printouts
- \* Improved Outdoor-Indoor Calculator to prevent crashing when RT is less than 0
- \* Fixed Outdoor-Indoor Calculator single figure index bug
- \* Added new Settings feature to adjust font size on main printout
- \* Added new items to INSUL Materials list
- \* Added new items to INSUL Absorption list

# Release 9.0.22 January 2020

\* Bug fix in Outdoor-Indoor calculator tool to maintain data integrity across elements

### Release 9.0.21 January 2020

- \* MacOS 64 bit version of INSUL is available
- \* Fixed bug in Triple Glazing routines with argon filled cavities
- \* Tidied materials lists
- \* In the Materials Editor, adjusted minimum values for the density field
- \* Minor updates for usability of tables and tab keys

\* Revised routines to reduce memory leaks and access errors

#### Release 9.0.20 July 2019

- \* Fixed bug recalling Single constructions with no porous facing
- \* Improved Composite TL Calculator functionality in Mac version
- \* Fixed bug in Double Impact Sound Pressure Level calculations with no cavity infill
- \* Improved pop-up menu display in Mac version
- \* Corrected access violation error which occured occasionally when changing language
- \* Minor printing improvements for Test Panel sizes
- \* Bug fix for rain noise models for orthotropic panels
- \* Improved Materials Editor closing routines
- \* Updated illustrations to improve rendering of cavity infill on file open
- \* Revised update-checking routines to prevent hanging
- \* Fixed bug for cavity details for Pitched Roof frame type

#### Release 9.0.19 May 2019

- \* Updated illustration dimensions for Ceilings, Floors and Roofs
- \* Fixed bug with resetting material lists upon Materials Editor close
- \* Fixed illustration bug for plotting CompositeSteelFloor systems
- \* Updated Indoor/Outdoor Calculator for improved printing of third octave band tables
- \* Fixed Composite TL Calculator printing bug for single octave tables
- \* Increased Indoor/Outdoor Calculator area and volume size limits
- \* Improved recollection of model details for PIR and similar frame types
- \* Tidied Porous tab layout to prevent overlapping lists
- \* Updated display for Custom materials to show in blue font
- \* New items added to INSUL Materials list
- \* New items added to INSUL Floor Cover list

- \* New items added to INSUL Absorption list
- \* Minor amendments to printouts to better handle very long descriptions
- \* Minor translation updates for German and French

# Release 9.0.18 November 2018 (Mac only)

- \* Sewell's correction wasn't applied to triple panels (since v9.0.11), added it back
- \* Panel stiffening wasn't being applied with 16g (1.6mm) steel studs, added them.
- \* For Composite Steel panels, in materials editor, prevent Rib height being greater than panel thickness

#### Release 9.0.17 October 2018

- \* Fixed bug for updating cavity infill thickness
- \* Updated translation of menu headings
- \* Improved printouts by preventing word wrapping of the header and cavity descriptions
- \* Fixed save file bug in the Composite TL Calculator
- \* Improved state handling in the Composite TL Calculator
- \* Updated chart export and illustration export to save to users My Documents
- \* Fixed bug in the Materials Editor for ElasticCore materials

#### Release 9.0.16 October 2018

\* Update to correct issue with cavity infill flow resistivity

### Release 9.0.15 October 2018

- \* Implemented Trial License feature for Mac OSX
- \* Improved usability for adding porous facing to Single constructions

- \* Fixed bug with application of porous facing to Floor and Roof constructions
- \* Updated illustrations to correct layouts for Ceiling, Floor and Roof constructions with no connections
- \* fixed bug in Outdoor to Indoor calculatr that wasn't copying 1/3 octave values for sound reduction spectrum (worked in octaves)

### Release 9.0.14 September 2018

- \* Updated calculations for floor with more than one layer in Panel 1
- \* Updated chart to prevent overlapping with Comparison buttons
- \* Fixed printing bug which displayed a porous description for models without a porous facing
- \* Fixed printing bug which displayed a floor cover description for walls and ceilings

## Release 9.0.13 September 2018

- \* Fix problem that you could not alter thickness of cavity infill
- \* Fix problem with copy and pasting results.
- \* Copy illustration now saves the picture/illustration to a file in the users Appdata folder
- \* Fixed illustration where cavity absorber is vertical instead of horizontal
- \* Fixed problem with SonArchitect export
- \* Fixed problem with adding porous absorber to ISPL and rain noise calcs
- \* Fixed problem with floor cover selection for light weight constructions
- \* Improved combo box selection functions in Materials Editors
- \* Updating chart legends for rain noise and ISPL calculations
- \* Updated description for Floor constructions, so the floor cover is listed first
- \* added CDM HR 50 flaoting floor and some AcoustiCork floor underlays
- \* CertainTeed materials modified Young's Modulus for some boards

- \* SoN export wan't working, hopefully fixed.
  - \* Rain noise bug (for decimal separator as , )
  - \* Fixed bug for new frame/connection types with no Impact calculation procedures

### Release 9.0.11 May 2018

- \* Fixed an open-file bug which occured when using comma as the decimal separator
  - \* Updated rating methods for rain noise calculations

### Release 9.0.10 May 2018

\* Fix Printing bug (no construction details printed, only leak stuff)

# Release 9.0.9 May 2018

- \* Re-worked Glazing algorithms to try and get the best empirical match between available data and INSUL
  - \* Add 0.75mm BMT steel studs
  - \* beginnings of Chinese Translation (ealy days)
  - \* Adding joist and stud dimensions to print outs
  - \* Fixing bugs with entering cavity dimensions
  - \* Minor additions to the Materials database
  - \* Updated calculations for leak predictions
  - \* Fixed minor bugs on Leaks tabs
  - \* Added leak details to printouts
  - \* Improved reliability of filtering functions in the Materials Editor
  - \* Updated string handling in search boxes to manage empty strings

- \* Added some decimal places to English units display.
- \* Fixed crashing when selecting Mini-orb roofing
- \* In Outdoor to Indoor calculator fixed mucked up grid when switching between octave and 1/3 octave
  - \* Added 28mm Furring Channel (Australian and New Zealand connections lists)
  - \* Fixed problem in SonArchitect export for glazing
  - \* Added Israel as a region
- \* add check box to force cavity width to remain constant (stud sizes adjust to maintain cavity width)
  - \* Partition dimensions now showing in OSX
  - \* Altered colour of buttons etc to make selections easier to see
- \* Improvements to Glazing section (add check box for timber sash windows, improved triple glazing algorithms for normal aluminium frames)
  - \* Added CertainTeed materials
  - \* Made most woods orthotropic.
  - \* Printing function added to the Materials Editor
  - \* Undo and Redo functions added to the Materials Editor
  - \* Undo and Redo functions added to the Composite TL Calculator
  - \* Added an underlay selection box to the Materials Editor Floor Covers tab
  - \* Updated Composite TL Calculator to better handle very small element areas
  - \* 'All regions' searching option added to the Materials Editor search window
- \* Revised styling for buttoms on the main INSUL window, including options in the View menu to change Style and layout
  - \* Revised styling for the Materials Editor search window, using expander lists
  - \* Updating Materials Editor form size for improved display on Surface Pros
  - \* Add STC/Rw single panel rating to Properties display.
- \* Can now select and show a frame for a single panel, useful for getting the illustration more correct in some situations

\* As a consequence of last item we have changed the way you add a porous facing, now added in Frame 1 (no longer on the porous page).

### Release 9.0.7 October 2017

- \* Hopefully got on top of printing issues (previously only 600 dpi really worked properly)
- \* Add Cold formed steel joists as option for ceilings and floors
- \* Add load bearing steel studs with resilient rail (1.0-1.6mm or 20g to 16g)
- \* Add prediction of impact sound for plastic foam underlays.
- \* Fix incorrect addition of impact sound levels for octave band display
- \* Re-instate transmission loss for specific angles of incidence for free field on source side
- \* Re-enable display and entry of dynamic stiffness (metric units only)
- \* Added panel information to 2D display
- \* Fixed illustration of batten and cradle spacing for 400mm etc
- \* Minor translation fixes
- \* Added margin of error to printout
- \* Correctly set, and store and recall setting of frequency ranges for C and Ci
- \* Increase length of project number and name
- \* Fix problems in SONarchitect export of floors (not export airborne and impact at the same time)
  - \* Added EVA as a glazing interlayer option
  - \* Added GTEC resilient acoustic stud as a frame option
  - \* Many small improvements to the French translation
  - \* Beginnings of Polish and Chinese translations
  - \* Fix bug in Impulse reponse generator in Auralisation (didn't affect the main auralisation part)
  - \* Fix bugs in English units for surface mass dimensioning of glazing constructions
  - \* More work on improving the Mac OS version

- \* Printing of 2D illustration
- \* More tweaks to printing of custom logo
- \* Adjust scale of 2 D illustration (use mouse wheel)
- \* Fix bug of Ceiling/Floor absportion not correctly showing in Description Box
- \* Numerous updates to the Outdoor-Indoor calculator
- Can change colour of lines on graph
- Moved location of Dntw line as this is an overall quantity
- Fixed equation constants for English units (and corrected it for metric units)
- Added a Save As button
- \* Added Rw+Ctr to display (its quite small at this stage)
- \* Display floor cover and underlay parameters and enable editing thereof for heavy floors
- \* Correct drawing of trapezoidal profiles when used on panel 2 or 3 so the ribs poke out instead of in
- \* More work on Outdoor to indoor calculator (enable bigger graph when screen is enlarged, fixed issues with printout)
- \* Improved WAV file library feature. Can now set a default folder as your library and store your own WAV files there.
  - \* Improvements to triple glazing calculations
  - \* Improved printouts for rain Noise calculations (added rain fall rates, roof areas, rain type etc)
  - \* fixed default value of PIR for English units
  - \* Fixed translation of drop down lists in the Materials Editor.
  - \* Fixed bug when showing properties of Porous material
  - \* Selected material should be at top of the box at (almost) all of the time now.
  - \* Cursor changes to cross hairs when over illustration to indicate you can click for properties.
- \* layers 2 to 6 by default have number of layers = 0 , but now when you choose a material it automatically sets to = 1

- \* Added 2 D illustrations as an option instead of 3 D
- \* Fixed up setting for show or no show flanking on graph.
- \* Fixed autoscale so it is a bit more logical.
- \* fixed logo display (aspect ratio of logo is preserved.)
- \* Outdoor calculator various small improvements (descriptions as graph legends, graph on printout, improved grid behaviour)
  - \* Added a line to the Outdoor to Indoor calculator for including an arbitary insertion loss (could be used for shielding or screening for instance)
- \* Added Stucco to USA materials list, Custom Orb and fibre cement to Australian list, USG Structo Concrete
  - \* Fixed some issues with auralisation
  - \* Fixed floor infill poking through floor if too thick. Showed display of 2nd blanket in floors.
  - \* Completed most everything for the French translation.
  - \* Small improvements to the Materials Editor.
  - \* Added Chilean materials
  - \* Tidy up some flooring material data
  - \* French translation improved.

### Release 9.0.4 July 2017

- \* Can be downloaded from http://www.insul.co.nz/media/29470/Update90r04.exe
- \* Fix left axis title on graph for impact calcs (show correct label)
- \* Don't show flanking curve when not appropriate
- \* Store and recall setting of dBA,NC,PNC or NR
- \* Improved accuracy for strapped and lined walls
- \* Added Akustik mounts (ceiling and floor)
- \* Made key update function work
- \* Enabled SONarchitect export.

- \* Fixed display of wrong frequency range for Ctr
- \* Removed DnT,w from printout.
- \* Added floor cover description to print out
- \* Added a few properties to line at bottom of screen.
- \* Fix bug that changed cavity width after closing Settings form (apparently changed STC/Rw when changing eg Room Volume)
  - \* Get Update function working again (from this update onwards)
  - \* Fix minor bugs with Materials Editor search function
  - \* Added legend to Materials Editor Floor Cover chart
  - \* Updated handling of Batten and Cradle constructions for Floor calculations
  - \* Spanish translation of main form (other forms still to come).

#### Release 9.0.3 June 2017

- \* Add left and right steel studs with an airgap.
- \* Fixed some install problems when no regional materials were visible
- \* Flanking curve was not showing for masonry constructions.
- \* Rain noise, can now set room volume correctly
- \* Fixed problem on start up occurring with systems with 2 screens of different size.
- \* Flanking options appear when clicking "show flanking"
- \* Unlinked core density for panel 1 and panel 2.
- \* Orthotropic panels now have an illustration (previously blank)
- \* German translation now available
- \* Tidy ups of composite transmission loss calculator
- \* Fixed bug with printout of OITC (was always 9 dB) now correct.
- \* Now shows the marked block in grids (essential when copying for instance)
- \* Outdoor to Indoor equation has correct constant for Imperial units.
- \* Fixed nasty dip when using two panels with critical frequencies more than 2/3 octaves apart
- \* Custom stud file so that users can create their own database of standard stud sizes

- \* Add copy and paste functions to composite TL calculator, and to outdoor-indoor calculator (so you can transfer results).
  - \* New Help file.
  - \* Numerous small bug fixes.
  - \* Added calculator to estimate the flow resistivity of porous materials

## Release 9.0.1 April 2017

- \* Added search feature to floor cover list
- \* Added National Gypsum plasterboard materials to US regional list

#### Release 9.0.0.7 April 2017

- \* Initial release (with outdated Helpfile). List of new features compared to version 8
- \* New user interface design with 3 D illustration of the construction that can be zoomed and rotated.
- \* Better utilisation of small or big screens. (Elements of interface can be re-arranged for personal preference)
  - \* Prediction of floating floors using polystyrene or mineral wool with concrete screed on top.
  - \* Double absorptive blankets can be selected (means illustrations can be more realistic)
  - \* Prediction of external cladding systems using PIR or Polystyrene insulation
  - \* Better auralisation with a user expandable library of sounds.
  - \* Ability to record auralisations for later replay without INSUL
  - \* New types of connections and improved illustrations
  - \* Thermal insulation of glazing (according to EN 673)
  - \* Database of steel or timber studs (standard sizes selected from menu).
  - \* Pitched roofs can now be predicted

- \* Multi-platform (Windows, Apple Mac Os) (this may be a couple of months away)
- \* Better search through materials files.
- \* Filtering lists by category or manufacturer.
- \* New types of frames/connections such as Batten and Cradle isolation pads