



FC Recipe Calculator

USER MANUAL

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Introduction

FC Recipe Calculator is program for calculating the recipe for foam concrete production, taking into account the volume of foam contained in foam concrete. This program is mainly designed for technologists.

Availability

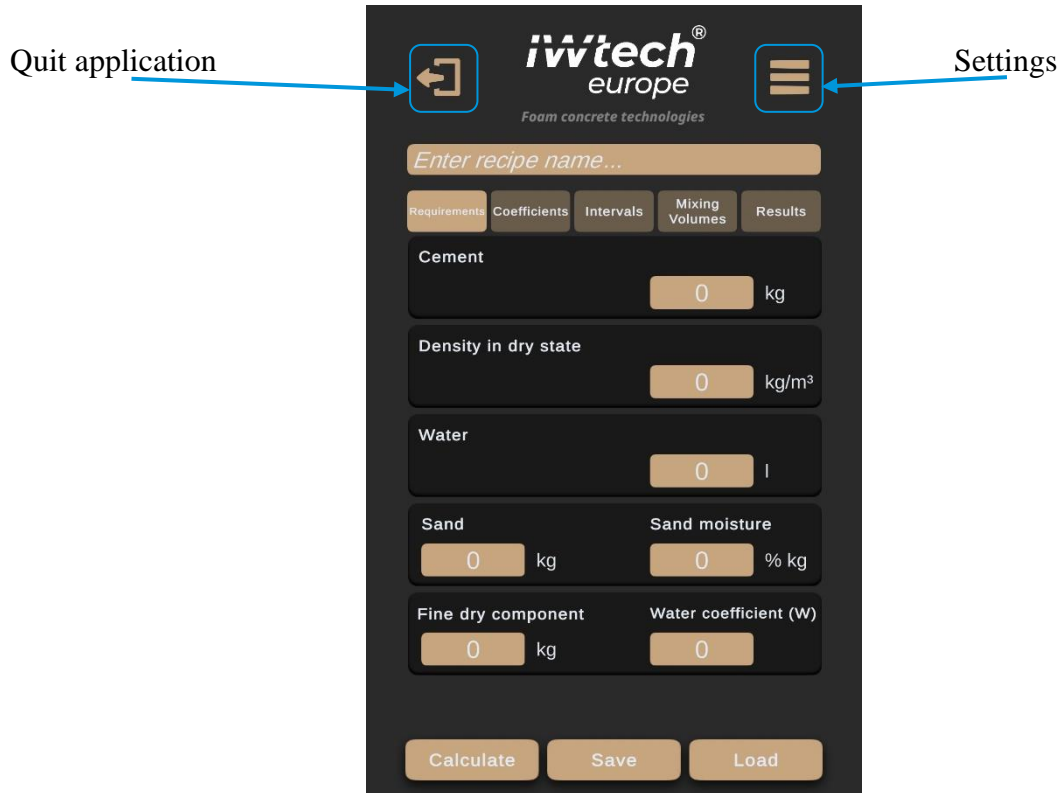
Android:

The application is only available in tablets, which you get with the order of the industrial generator of technical foam. All necessary components of the application are present in tablet for maximum reliability.

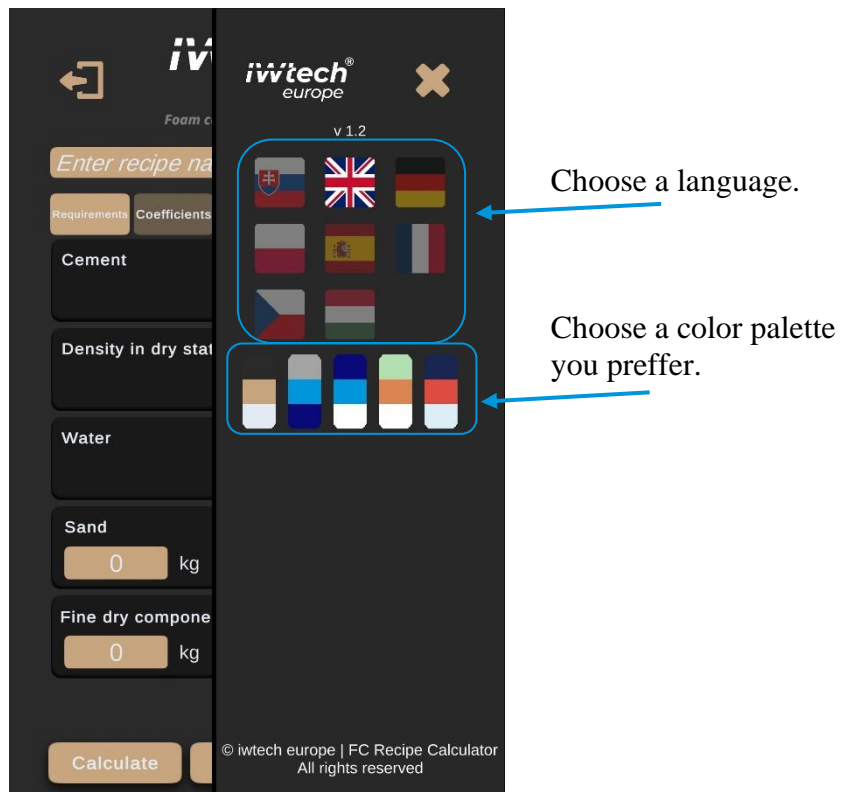
Windows:

Windows application is available with the order of the industrial generator of technical foam in zip file.

Main Screen



Settings



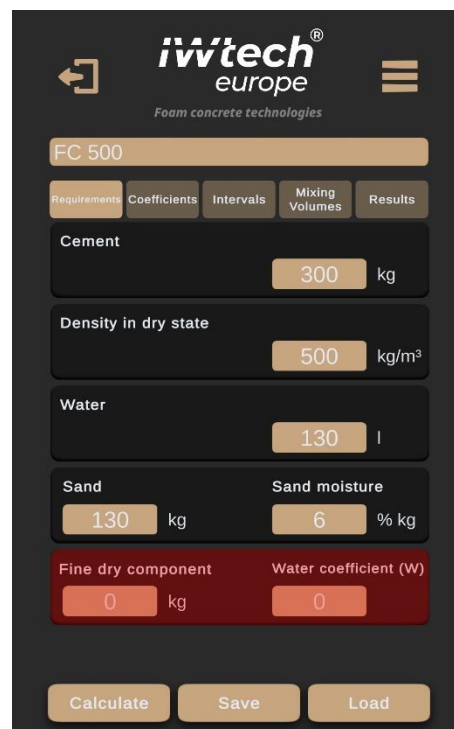
How to create recipe

Target cement

If you need specific amount of cement in your recipe you can do so by setting a targeted cement in “Cement” field.

All recipes require Density in dry state with Water or additionally adding sand with its approximate moisture.

Attention, in this case you cannot set fine dry component.



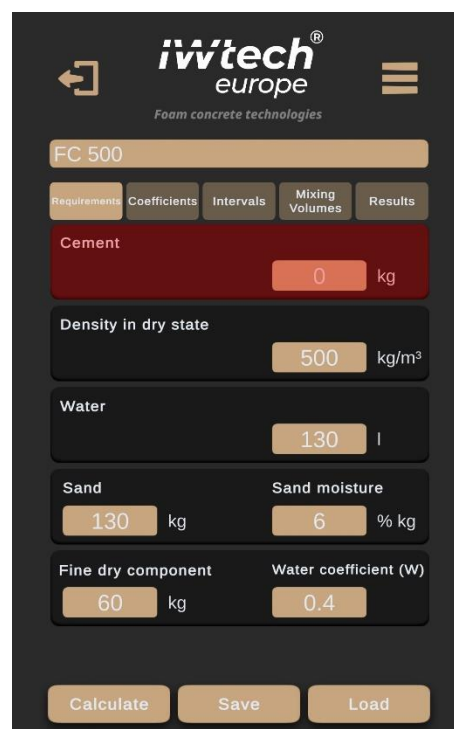
The screenshot shows the 'iwvtech europe' mobile application interface for creating a recipe. At the top, it displays 'FC 500' and navigation tabs: 'Requirements', 'Coefficients', 'Intervals', 'Mixing Volumes', and 'Results'. The 'Cement' field is highlighted in dark grey and set to 300 kg. Below it, 'Density in dry state' is set to 500 kg/m³. The 'Water' field is set to 130 l. The 'Sand' field is set to 130 kg with a 'Sand moisture' of 6 % kg. The 'Fine dry component' and 'Water coefficient (W)' fields are highlighted in red and both set to 0. At the bottom, there are three buttons: 'Calculate', 'Save', and 'Load'.

With fine dry component

If you want to use fine dry component in your recipe you need to consider correct water coefficient (W) and K-value (K-value can be modified on Coefficients page).

All recipes require Density in dry state with Water or additionally adding sand with its approximate moisture.

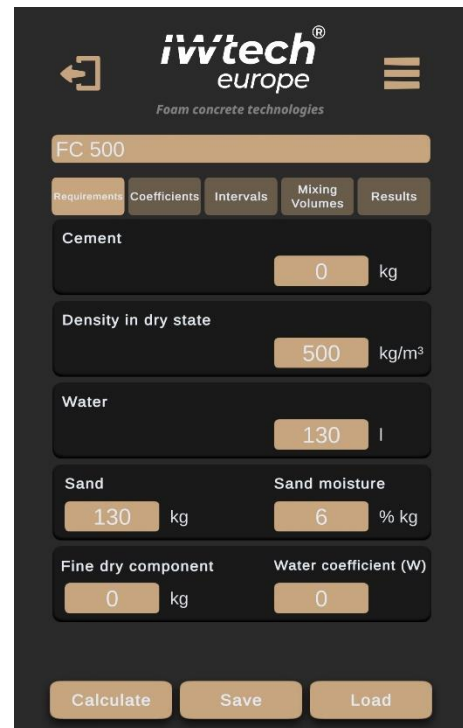
Attention, in this case you cannot set target cement.



The screenshot shows the 'iwvtech europe' mobile application interface for creating a recipe. At the top, it displays 'FC 500' and navigation tabs: 'Requirements', 'Coefficients', 'Intervals', 'Mixing Volumes', and 'Results'. The 'Cement' field is highlighted in dark grey and set to 0 kg. Below it, 'Density in dry state' is set to 500 kg/m³. The 'Water' field is set to 130 l. The 'Sand' field is set to 130 kg with a 'Sand moisture' of 6 % kg. The 'Fine dry component' field is highlighted in dark grey and set to 60 kg. The 'Water coefficient (W)' field is highlighted in dark grey and set to 0.4. At the bottom, there are three buttons: 'Calculate', 'Save', and 'Load'.

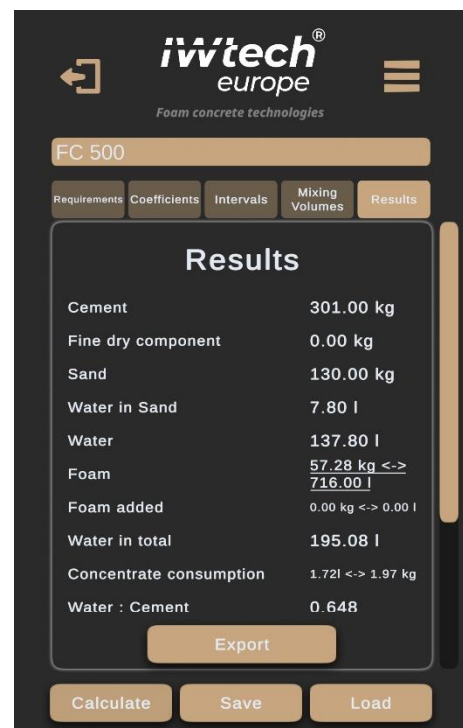
Without fine dry component

Without target cement or fine dry component, you can create recipe using “density in dry state” with “water” or additionally adding sand with its approximate moisture.



Example of valid results

After entering valid requirements, coefficients and intervals and pressing “Calculate” button, the Result page will show up with all calculated components. You are able to export this data to pdf file by pressing “Export” button.



Results	
Cement	301.00 kg
Fine dry component	0.00 kg
Sand	130.00 kg
Water in Sand	7.80 l
Water	137.80 l
Foam	57.28 kg <-> 716.00 l
Foam added	0.00 kg <-> 0.00 l
Water in total	195.08 l
Concentrate consumption	1.72l <-> 1.97 kg
Water : Cement	0.648

Mix. Volume

In order to recalculate recipe for specific volume, you can do so on “Mixing Volumes” page. This change will appear after pressing “Calculate” button with valid result.

The screenshot shows the 'iwvtech europe' mobile application interface. At the top, there is a navigation bar with a back arrow, the logo 'iwvtech europe', and a hamburger menu icon. Below the logo, it says 'Foam concrete technologies'. The main content area is titled 'FC 500' and has a tabbed interface with five tabs: 'Requirements', 'Coefficients', 'Intervals', 'Mixing Volumes' (which is selected), and 'Results'. Under the 'Mixing Volumes' tab, there is a section titled 'Volume 1' containing a list of ingredients and their quantities:

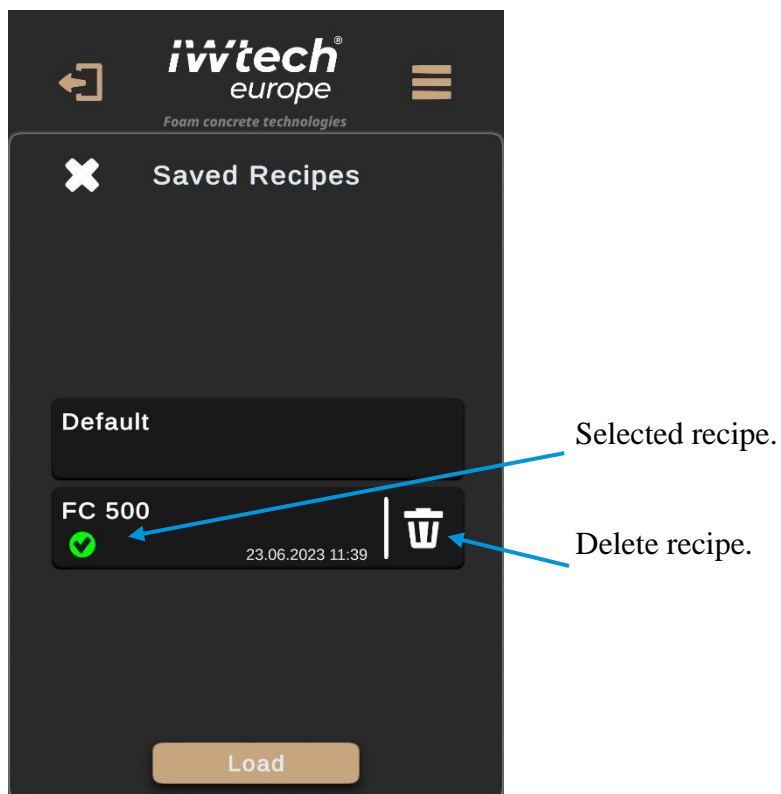
Cement	1505.00 kg
Fine dry component	0.00 kg
Sand	650.00 kg
Water	689.00 l
Water in mixing	39.00 l
Foam	3580.00 l

At the bottom of this section, there is a text input field containing the value '5000 l'. Below the main content area, there are three buttons: 'Calculate', 'Save', and 'Load'.

Save recipe

If you want to save all the changes made in requirements, coefficients, and intervals you are able to save the recipe by pressing “Save” button on main screen.

You can load these recipes by pressing “Load” button on main screen and then selecting the one requested by you.

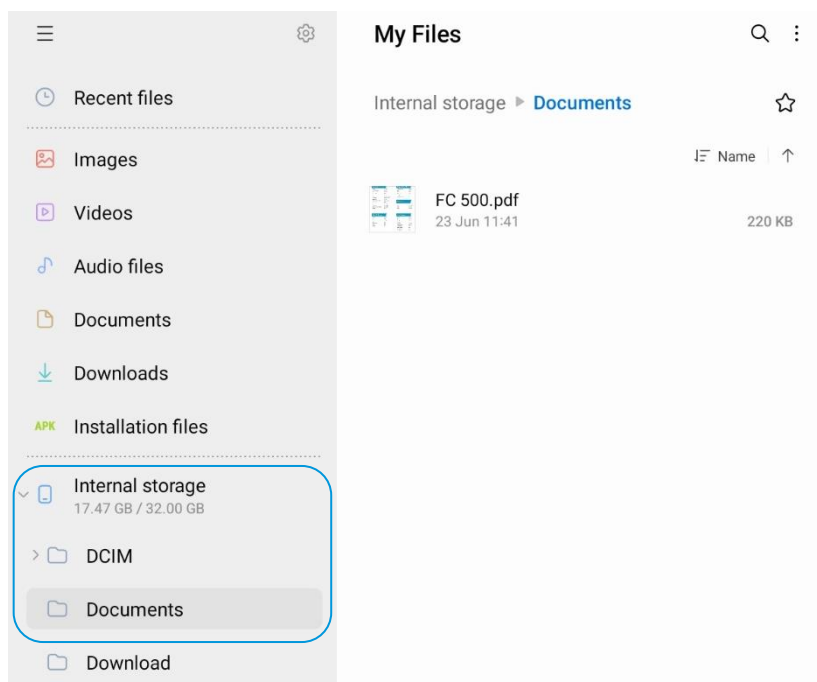


Exporting recipe to PDF

To export recipe to pdf file, you need to press the Export button which can be found after the valid calculation of your requirements on Results page.

Android:

On android device (tablet), pdf file is saved in path:
“Internal Storage / Documents / recipeName.pdf”

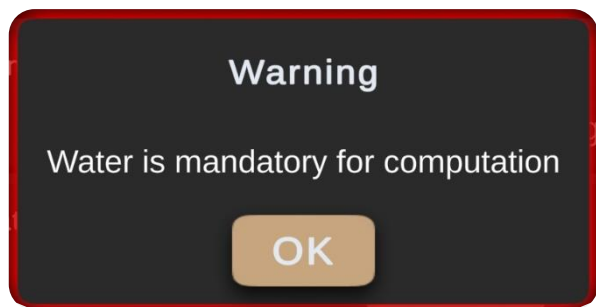
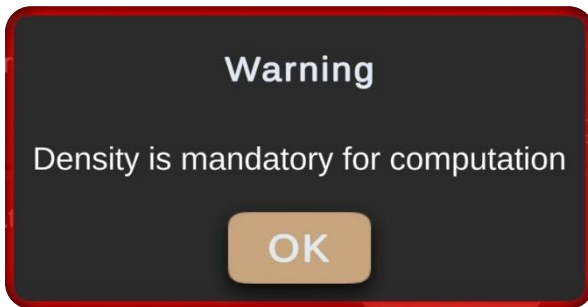


Windows:

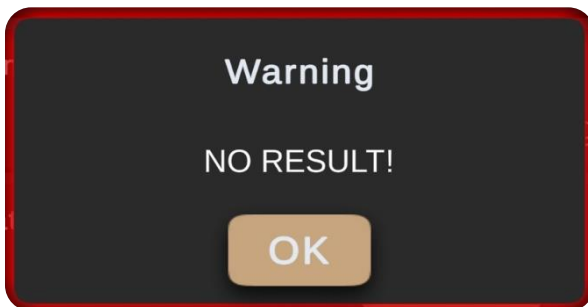
On windows system, pdf is saved Downloads folder, exact path looks like this:
“C: \ Users \ userName \ Downloads \ recipeName.pdf”

Warning types

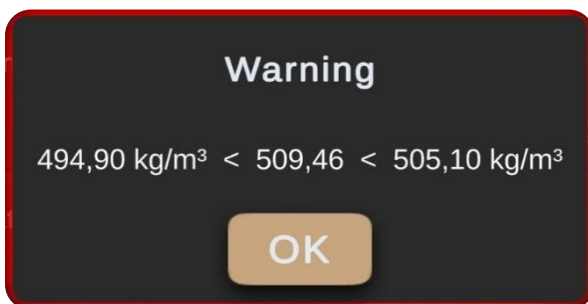
Density and water is mandatory for computation. This means that there is no value which is correct for calculation. (Default value 0)



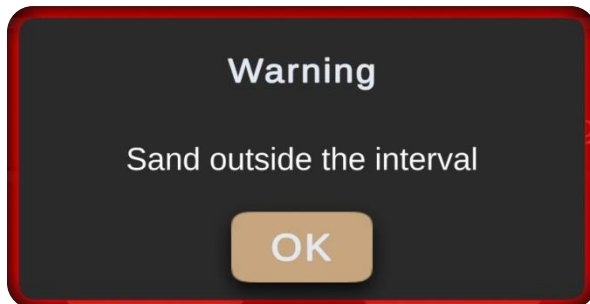
No result means that with current requirements and coefficients the program is unable to calculate valid results.



Example of **required volumetric weight** that is not within the tolerance interval. If this happens you probably need to decrease or increase amount of sand in requirements.



Foam, sand, water or cement is outside the interval. Not all results are in the intervals that are defined on Intervals page



Working with **fine dry component** requires K-value and Water coefficient (W).
K-value is available and can be changed in Coefficients page. K-value should be in interval higher than 0.
Water coefficient (W) is available and can be changed in Requirements page. Value of (W) should be in interval higher than 0 and lower than 1.

