

**THESE PROGRAMS ARE FOR MS EXCEL.
THE FILES ARE LOCATED ON THE CD IN THE EXCEL FOLDER.**

Blankinv – Survival Excell Program that lets you keep up with your survival inventory. You need Microsoft Excel to use this spreadsheet. It was created using Excel 97. You can change modify or do anything you want to. The program password is lj Password protected it to prevent accidental formula erasure.

Open your Excel program and select the Excel directory on the CD and proceed with a file open on blankinv.

1. DO NOT type anything on the first page. Only fill in the blanks on the subsequent pages.
2. I suggest naming it "Inventory" or something other than the (relatively) descriptive "blankinv".
3. On the "books" page, I suggest broad categories in the "subject" column - something like: skills, firearms, gardening, etc.
4. I have found this to be a pretty useful tool in identifying areas that I need to improve my stock of. I hope you do too.

Concretecalc1.xls – At last a simple to use file to help you calculate the amount of concrete you need on a project.

Open your Excel program and select the concrete directory on the CD and proceed with a file open on Concretecalc1. This is a simple to use program.

CONDEZ12.XLS - At last a simple to use, fully integrated mix design and batch program with built-in features not found in any other software. The spreadsheet is fully operational and will work approximately 30 times before some features become unusable.

Concrete Mix Design & Batch Instructions - Requirements: Runs on Microsoft Excel 97 + Pentium computer pref with 32 meg ram - Will not run with other Excel Workbooks open

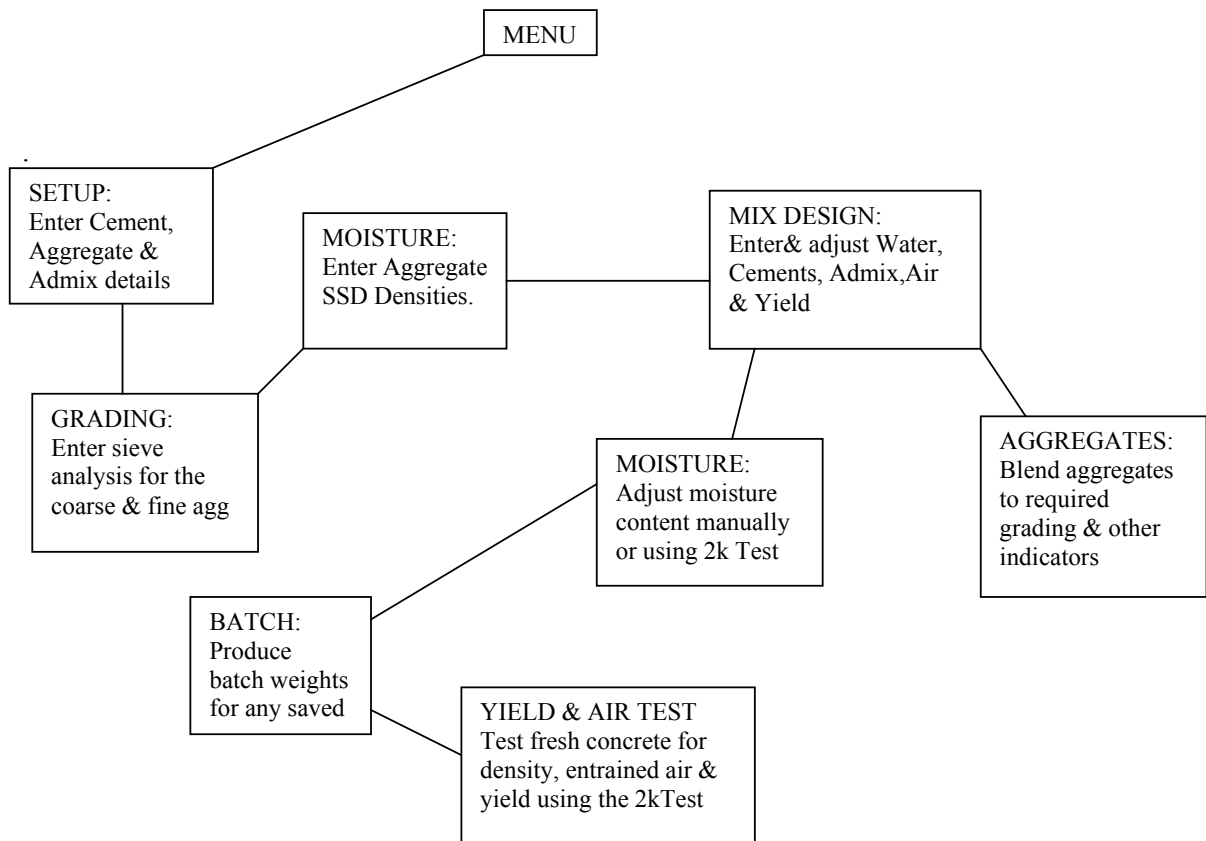
Open Excel and go to the CD directory that contains the condez12 file. Open the file.

Tips: The program runs best with a Pentium computer with at least 32 meg ram. It will run with only 16 but will be slow. It is preferable to run the program without any other Excel workbooks open at the same time.

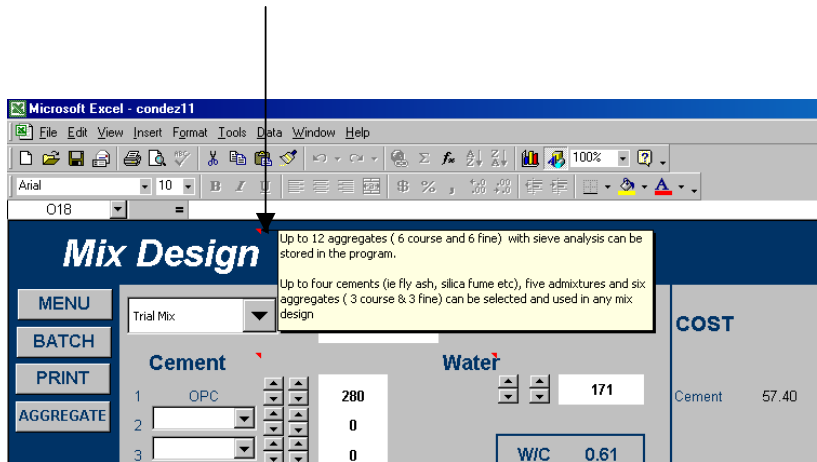
If an error message appears regarding circular references select **Tools – Options** and then select the **Calculation** tab and tick **Iteration**.

Mix Design: User friendly interface means the program can be used as a tool to produce a simple concrete mix or by using the advanced features enables the user to produce accurate complex mixes using multiple cements, admixtures and aggregates. The program makes it simple to adjust mixes. If for example extra water, cement or any ingredient is adjusted, simply adjust the yield control back to the required amount ie.1000 (1 cu m) and the aggregates are adjusted automatically. Again if for example more fine aggregate is required, one control will adjust all the coarse aggregates and all the fine aggregate volumes and weights automatically.

Batch: Simply select any saved mix and the batch amount and all batch weights are displayed.



The program is easy to learn and a sample mix is installed so you can adjust this mix to see how the various indicators and screens work. There are built in help comments in most screens. Simply move the mouse over the red triangle and a help comment will appear.



SETUP

Before entering in a mix design the material details need to be entered in the **SETUP** screen. This only needs to be done once or if a new material is added at a later date. Enter the cement names and specific gravity's and the costs per ton. Enter the admixtures with their specific gravity's , costs and addition rates (optional). Enter the course and fine aggregates (up to six of each) and their costs per ton.

The SSD Density of the aggregates is entered in the **MOISTURE** screen . This is because the SSD Density and moisture content is monitored by the Test Kit (optional) and adjustments can be made easily on the one screen.

If you have the sieve analysis of the individual aggregates they can be entered in the **GRADING** screen. Select the aggregate from the drop down menu and enter the sieve analysis and then click on the SAVE button.

MIX DESIGN

1.

A new mix can now be entered. Select the desired location of the mix from the Drop down menu. Up to 100 mixes can be stored on one worksheet so you might want to group the mixes in strength or aggregate sizes. You can edit the code or name of the mix in the edit box to the right of the drop down menu.

2.

Using the spinner controls, dial up the desired cement content and then the desired water content. (Where there are two spinner controls, the left one is a slow control and the right one is for making larger adjustments more quickly. The desired amount cannot be entered directly in the cell). The water/cement ratio and an indicated target strength are displayed in the blue box.

3.

Enter in the desired admixtures. The first two are for air entrainer and water reducer and the remaining three can be used for any of the admixtures entered in the setup. The No. 3 additive is programmed to increase in increments of 100 mls. The No. 4 & 5 are programmed to increase in increments of 1 litre or 1 kg.

4.

The air content can now be adjusted using the spinner control.

5.

The slump is entered using the spinner control. (This entry has no effect on the mix design, but is saved and displayed when mix design is printed or when the batch screen is used to display the designed slump).

6.

Finally on this screen adjust the Yield to the desired amount.

7.

To adjust and blend the aggregates to the desired grading, click on the **Aggregates** button To start, select the desired aggregates to be used for the mix using the drop down menu boxes at the top of the screen. The three on the left are for coarse and the three on the right are for fine aggregates. Up to three coarse and three fine aggregates can be blended into any one mix.

Once you have selected the coarse and fine aggregates for the mix the next step is to adjust the desired fine aggregate percent using the spinner controls. (Located centre top).

If the individual sieve analysis has been entered, the lower chart with combined grading can be viewed as the aggregates are adjusted. If not the top bar chart showing aggregate volume % can be viewed

Adjust the coarse and fine aggregates to achieve the desired combined grading which is displayed as you adjust. The FM and the Mortar content are also displayed as you adjust the individual aggregates. Target grading curves can be entered, saved and displayed on the chart to help achieve the desired combined grading. To display a saved target grading, use the drop down menu at the upper left of the screen. To enter a target grading curve or envelope, click on the **Edit Ref** button and enter the table and then Save. Click on the return button to return to the chart.

8.

Finally when you have adjusted the aggregates to the desired grading, click on the **Save Target** button. This will save the volume % , the FM and Mortar content , and the combined grading for future reference. If future aggregate sieve tests are significantly different the mix can be easily readjusted to the saved previous indicators which are all coloured in blue. The saved (blue) grading curve and indicators can be displayed on and off by clicking the tick box next to the Save Target button.

BATCH

Select the **Batch** button from the menu. Select the desired mix and batch volume and all batch weights are displayed. Batch volume increments can be changed by using the spinner control located under the volume selection control. (Increments are .05cu m to 2cu m for mini trucks and increments of .1cu m or .2cu m to 6 cu m for large trucks). The facility to print batch sheets can be added if required.

MOISTURE

Select the **Moisture** button from the menu . All the aggregates entered in setup will be displayed. The moisture content for any aggregate can be adjusted using the spinner control. The number to the left of the spinner controls is the final test weight when using the 2K test kit and is simply typed in or adjusted using the spinner control. Disregard this number if manually adjusting the moisture content using another method.

The SSD density of the aggregates is also entered in this screen as it is an integral part of the 2k Test which measures to a very high accuracy volume and density. Therefore the moisture content can be calculated by the program when a known SSD density has been entered.

To find the SSD density of an aggregate using the 2k test, a 2kg sample in SSD condition is placed in the container and the test procedure is run. The test weight is entered and then the SSD spinner control is adjusted until the moisture content is zero. The correct density is now displayed. Sounds complicated but full instructions and a video are included with the kit. In most cases the SSD density remains constant however regular moisture testing using the kit will pick up any variation.

The result is accurate yields and quick batching when the moisture and density of aggregates is correct.

FRESH CONCRETE TEST

The 2K test kit can also accurately test a 2kg sample of fresh concrete in one procedure taking approx 5 minutes. The mix being tested is selected and the **actual** batched water amount per cu m is entered as well as the three test weights. Fresh density, absolute density, yield, absolute yield and air content is displayed. If the results are outside tolerances, messages regarding likely causes are displayed.

This is a very useful test for regular quality control and for fine tuning a new mix design as it gives a lot of information quickly .