

Calculating Air Emissions from Fiberglass Operations

For questions, call the Small Business Assistance Program: (651) 282-6143 or (800) 657-3938

Step 1 Determine emission factors.

- Open the spreadsheet titled, Fiberglass.xls.
- Click on the tab at the bottom of this spreadsheet titled emission factors.
- Find the emission factors for styrene emissions for each resin or gel coat formulation used in each of your processes. Emission factors will be in pound of styrene per ton of resin or gel coat processed.
- You will have to enter %styrene values for resin formulations with styrene below 33% or above 50% by weight. Once these entries are made, these emission factors will automatically be calculated and will appear in the box to the right of the appropriate percent. If you enter 52%, for example, the emission rate will appear below in the box to the right of >50.
- You will have to enter %styrene values for non-atomized gel coat applications with styrene below 19%, 19% to 32%, and greater than 50% by weight. Once these entries are made, these emission factors will automatically be calculated and will appear in the box to the right of the appropriate percent.
- Along with %styrene, you will also have to enter values for any specific vapor suppressed resin reduction factors. Once these entries are made, these emission factors will automatically be calculated and will appear in the box to the right of the appropriate percent.
- Find the emission factors for methyl methacrylate (MMA) emissions for each gel coat formulation you use. Emission factors will be in pound of MMA per ton of gel coat processed.
- You will have to enter % MMA values for formulations with MMA at or above 20% by weight. Once these entries are made, these emission factors will automatically be calculated and will appear in the box to the right of ≥ 20 .
- You will use your emission factors to calculate emissions.

Step 2 Determine actual emissions.

- Click on the tab at the bottom of this spreadsheet titled actual emissions.
- Edit the spreadsheet to meet your needs. You can keep, add, delete, or change the process titles to match your operation.
- For resins and gel coats, enter the information to match your operation. You can type over the sample information or delete the sample rows and insert your own.
- For each resin and gel coat you will need:
 - Name for formulation
 - Pound/year purchased
 - Styrene Emission Rate in pound per ton of resin or gel coat processed.
 - MMA Emission Rate in pound per ton of gel coat processed.
- For hardner, the main component is methyl ethyl ketone peroxide, which is not a HAP. However, methyl ethyl ketone (MEK), which is a HAP, is usually present at about 1%. Change the % volatile organic compounds (VOCs) and % MEK if yours differs.
- The equations will automatically calculate your answers.

Step 3 Determine your potential to emit, if you have not already done so.

- Follow guidance and enter values in blue boxes. Total potential emissions will automatically be calculated. Call SBAP for help if this method does not seem to fit your operation.

