

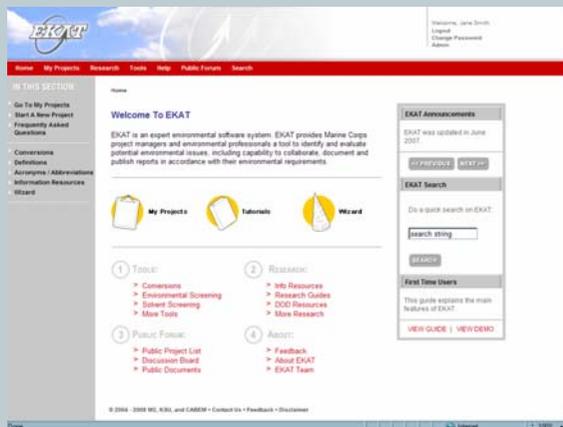


Use the Environmental Knowledge and Assessment Tool (EKAT) to estimate air emissions and more

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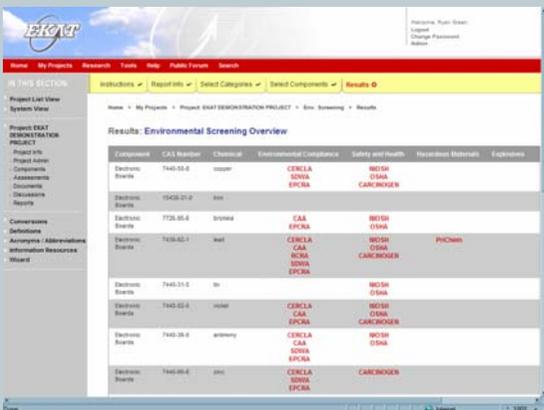
Introduction

Designed and built by the team of M2 Technologies, Kansas State University, and CABEM Technologies as members of the Urban Operations Laboratory (UOL), the Environmental Knowledge and Assessment Tool (EKAT, www.ekat-tool.com) is an automated tool to identify, research, and evaluate environmental and pollution prevention options for products. EKAT presents information on technical and regulatory requirements and serves as a resource center linking to other references, tools, and databases. One of the most beneficial aspects of EKAT is its ability to serve as a preliminary environmental screening tool for regulatory requirements and other potential issues of concern. EKAT contains a built-in emissions calculator and links to resources for assistance with compliance requirements.



EmisCalc

EmisCalc, EKAT's emissions calculator, estimates pollutant emissions associated with different equipment and process activities, using EPA-approved air pollution factors from the Factor Information REtrieval (FIRE) database. Different industrial processes are selected through a pull-down menu. Results are useful for air-permitting requirements and can also be seamlessly integrated with an EKAT assessment tool for life-cycle impact evaluations.



Environmental Screenings

The environmental screening tool compares chemicals the user enters to chemicals in the EKAT database and summarizes the results. The EKAT database includes listed chemicals regulated by federal law (Clean Air Act, Clean Water Act, Safe Drinking Water Act, etc.), lists of carcinogenic chemicals, Occupational Safety and Health Administration (OSHA) permissible exposure levels, and more. Information resources (IR) in EKAT provide links to original sources of information used in the environmental screening tool.



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Estimate Equipment Emissions In 5 Easy Steps

Try it at www.ekat-tool.com

View this EmisCalc Demonstration Project

Based on EPA Factor Information RETrieval (FIRE) Database

Tell us what you think!

Step 1: Emissions Calculation Assessment

EmisCalc enables users to rapidly generate estimated emissions for various air pollutants or contaminants, using information retrieved from the FIRE database to estimate actual emissions or calculate potential to emit for processes for which EPA data are available. The FIRE database contains emission factors from the Compilation of Air Pollutant Emission Factors (AP-42) (9th Edition) EPA also has a tool called InSpec FIRE, which provides access to air emission factor information. The generated pollution emission estimates may be used to support state air permitting requirements.

More information

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1. Read about EmisCalc

Step 4: Process Information

Default type of analysis: 'Potential to emit' is defined as operating 24 hours per year, 7 days per week. It is used for air permit applications. You will also enter actual or planned actual time periods of operation. These are used to calculate 'potential to emit'. Please enter activity levels. EKAT is unable to calculate emissions for activities levels of 0.

Analysis Type:

Source of Emission:

Gallons of Distillate Oil (Diesel) Burned per year:

Hours per week:

Weeks per year:

Pollutant	EPA Number	Control	Particulates
1,3-Butadiene	106-99-0	<input type="text" value="UNCONTROLLED"/>	Notes: Original factor was given in the FIRE table as being less than 0.0015
Acetylene	83-32-9	<input type="text" value="UNCONTROLLED"/>	

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4. Add Use Information

Step 2: Report Info

System/Unit Name:

System/Unit Designation:

System Description (for reports):

Organization:

Project Officer/Point of Contact:

Name:

Contact Information:

Other descriptors for output form:

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2. Type Report Heading

Results: EmisCalc

Your EmisCalc Calculator and/or TRAC reports are ready for download. Please select the format on the right to download your reports.

Save Reports

Download for Microsoft Word:

Download for Microsoft Excel:

TRAC Assessment Reports

TRAC Assessment with the results from EmisCalc:

Download for Microsoft Word:

Download for Microsoft Excel:

Download for EPA selected Output Links:

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5. Open Report

Step 3: Source of Emission

Enter either the source category code (SCC) if known, or select a source using the pull-down menus. In order to proceed, you must select an option from each of the five levels.

Enter SCC Code (if known)

Level 1:

Level 2:

Level 3:

Level 4:

Level 5:

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3. Select Emissions Source

Emissions Calculator (EmisCalc) Results

Analysis Type	Potential to Emit
EmisCalc Source Type	Internal Combustion Engines - Commercial Institutional - Distillate Oil (Diesel) - Reciprocating
Gallons of Distillate Oil (Diesel) Burned per year	1040.00
Hours per week of processing	168
Weeks per year of processing	2

Pollutant	CAS Number	Result	Unit
1,3-Butadiene	106-99-0	0.15	Lb
Acetylene	83-32-9	5.39e-003	Lb
Acetylbiphenyl	208-96-8	0.02	Lb
Acetaldehyde	75-07-0	2.91	Lb
Acetone	107-02-8	0.55	Lb
Alkylidene	107-02-8	268.72	Lb
Anthracene	120-12-7	7.10e-003	Lb

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