

January 2021

---

## **REPORTABLE QUANTITY CALCULATOR**

---

### **INTRODUCTION**

The Reportable Quantity (RQ) Calculator is an assistance tool that provides the Department of Energy (DOE) and its contractors with an efficient and user-friendly way to determine compliance with applicable reporting requirements for releases of hazardous substances to the environment. The tool helps to expedite the determination of whether an RQ was exceeded and provides contact information for reporting releases to the appropriate regulatory authorities.

### **BACKGROUND AND PURPOSE**

Any U.S. entity who handles hazardous substances or extremely hazardous substances is subject to both the spill reporting requirements of Section 103(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Section 304 of the Emergency Planning and Community Right-to-Know Act (EPCRA). Any release of a hazardous substance or an extremely hazardous substance to the environment, in an amount equal to or exceeding its RQ within a 24-hour period, must be reported to the proper authorities (40 CFR 302; 40 CFR 355, Subpart C). Responsive spill reporting involves determining how much material has been released in a 24-hour period, calculating if that amount exceeds its RQ, and reporting this information to the appropriate authorities in a timely manner. The DOE Office of Sustainable Environmental Stewardship (AU-21) developed the RQ Calculator to assist DOE and its contractors in addressing these release notification requirements. It is the responsibility of the user to ensure appropriate reporting.

### **DETERMINING A RELEASE**

The RQ Calculator determines the amount of a hazardous substance released based on its rate of release during a 24-hour period. For hazardous substances in a mixture, the RQ Calculator uses the mass of the hazardous substance in the mixture released over a 24-hour period to determine the amount of the reportable substance that has been released.

### **FEATURES OF THE RQ CALCULATOR VERSION 4.0**

The RQ Calculator is a web-based tool first developed in 1998 to assist DOE in meeting spill reporting requirements. Version 4.0 of the calculator contains an up-to-date listing of RQ values for hazardous and extremely hazardous substances and their Chemical Abstract Service Registry Numbers (CASRN). The RQ Calculator website provides up-to-date DOE and Environmental Protection Agency guidance, applicable Federal regulations and up-to-date reporting information (i.e., contact information for the appropriate governmental authorities). Since the calculator is web-based, it can be accessed at any time and can be used on computers, laptops, tablets and mobile phones. No special equipment or software is needed to use the calculator.

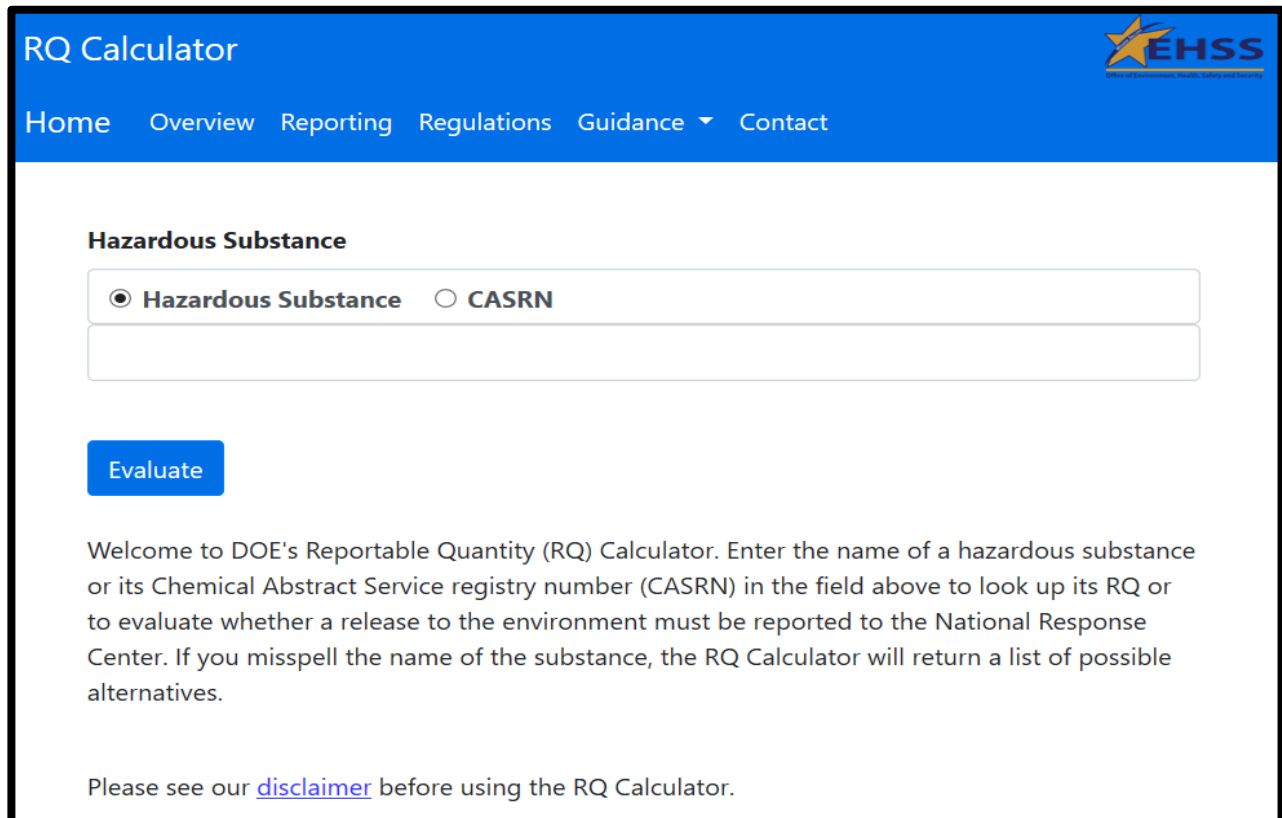
## HOW TO USE THE RQ CALCULATOR

### Step 1.

Open a web browser and copy or type in the link for the RQ Calculator:

<https://rqcalculator.projectenhancement.com/>. You will then be taken to the RQ Calculator home screen (Figure 1).

Figure 1

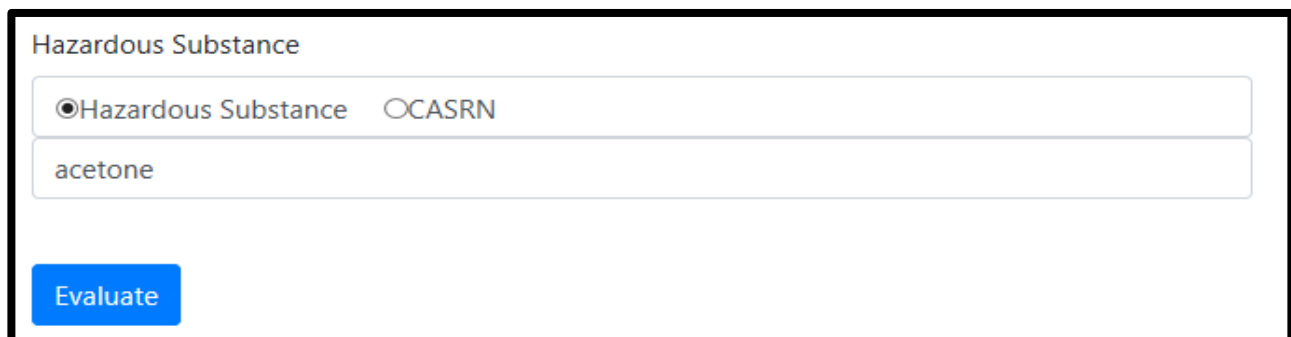


The screenshot shows the RQ Calculator web interface. At the top, there is a blue header with the text "RQ Calculator" on the left and the "EHSS" logo on the right. Below the header is a navigation menu with links for "Home", "Overview", "Reporting", "Regulations", "Guidance" (with a dropdown arrow), and "Contact". The main content area has a heading "Hazardous Substance" followed by two radio buttons: "Hazardous Substance" (which is selected) and "CASRN". Below these is a large, empty text input field. A blue "Evaluate" button is positioned below the input field. At the bottom of the main content area, there is a paragraph of text: "Welcome to DOE's Reportable Quantity (RQ) Calculator. Enter the name of a hazardous substance or its Chemical Abstract Service registry number (CASRN) in the field above to look up its RQ or to evaluate whether a release to the environment must be reported to the National Response Center. If you misspell the name of the substance, the RQ Calculator will return a list of possible alternatives." Below this paragraph is a link to a "disclaimer".

### Step 2.

Input the name of the hazardous substance (e.g., acetone) or the CASRN number (e.g., 67641) in the field provided at the top of the RQ Calculator input screen, then click 'Evaluate' (Figure 2).

Figure 2



This screenshot shows the same RQ Calculator interface as Figure 1, but with the text "acetone" entered into the input field. The "Evaluate" button remains visible below the field.

### Step 3.

From the results that are provided, select the hazardous substance that is applicable (Figure 3).

Figure 3

Results					
	Substance	CASRN	RCRA Waste No.	Type*	Final RQ Pounds
Select	Acetone	67-64-1	U002	HS	5000
Select	Acetone cyanohydrin	75-86-5	P069	EHS	10
Select	Acetone Thiosemicarbazide	1752-30-3		EHS	1000
Select	Bromoacetone	598-31-2	P017	HS	1000

### Step 4.

After selecting the applicable hazardous substance, input the amount released, time period of release, and percent of mixture (i.e., percentage of a specific substance contained within a mixture); and then click 'calculate' (Figure 4).

Figure 4

Results					
	Substance	CASRN	RCRA Waste No.	Type*	Final RQ Pounds
Select	Acetone	67-64-1	U002	HS	5000

\* HS = CERCLA Hazardous Substance subject to 40 CFR 302.  
EHS = EPCRA Extremely Hazardous Substance subject to 40 CFR 355.

[Back](#) [New Substance](#)

**Calculator**

Amount Released:

Time Period of Release:

Percent of Mixture\*:  %

\*Percent of Substance in the total release (by mass).

[Calculate](#)

## Step 5.

The calculator will then tell you if the amount released is reportable or not. If the amount is reportable it will be shown in **red** (Figure 5) and if the amount is not reportable it will be shown in **green** (Figure 6).

Figure 5 (Example of a release amount that exceeds the RQ)

**THIS IS A REPORTABLE QUANTITY!**  
Over the course of 24 hours this would be a reportable spill! The quantity would be 5040 pounds assuming a continuous release.

**What to Do:**

**Compliance with CERCLA**

When a hazardous substance is release into the environment in an amount equal to or exceeding its RQ within any 24-hour period, the person in charge of the facility must immediately notify the National Response Center (800-424-8802 in Washington, DC).

**Calculator**

Amount Released:	<input type="text" value="3000"/>	<input type="button" value="Pounds"/> ▾
Time Period of Release:	<input type="text" value="10"/>	Hours
Percent of Mixture:*	<input type="text" value="70"/>	%

\*Percent of Substance in the total release (by mass).

Figure 6 (Example of a release amount that does NOT exceed the RQ)

**THIS IS NOT A REPORTABLE QUANTITY!**  
Over the course of 24 hours this would not be a reportable spill. The quantity would be 720 pounds assuming a continuous release.

**Calculator**

Amount Released:	<input type="text" value="3000"/>	<input type="button" value="Pounds"/> ▾
Time Period of Release:	<input type="text" value="10"/>	Hours
Percent of Mixture:*	<input type="text" value="10"/>	%

\*Percent of Substance in the total release (by mass).

## NOTIFICATION REQUIREMENTS

When a hazardous substance is released to the environment within a 24-hour period in an amount that equals or exceeds its RQ, the person in charge of the facility must immediately notify the National Response Center. Contact information for the National Response Center can be found under the reporting tab in the RQ Calculator. Reporting may also be required under EPCRA; contacts for EPCRA reporting are also available on the reporting tab of the RQ Calculator.

For questions regarding this Information Brief or the RQ Calculator, please contact: Ashley L. Ruocco, Office of Sustainable Environmental Stewardship (AU-21) at [ashley.ruocco@hq.doe.gov](mailto:ashley.ruocco@hq.doe.gov) or 301-903-7010.