

## 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 Environment, Health, Safety and Security (EHSS) 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<sup>1</sup> 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

The RQ Calculator is a web-based tool first developed in 1998 to assist DOE in meeting spill reporting requirements. Version 4.3 of the calculator contains an up-to-date<sup>2</sup> 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 [reporting information](#) (i.e., contact information for the appropriate governmental

<sup>1</sup> Due to complexities of calculating reportable quantities for radionuclides, radionuclides are not included in the RQ calculator. However, radionuclides do have reportable quantities. Please see the guidance on the RQ Calculator website for resources on radionuclide reporting.

<sup>2</sup> As of May 31, 2025.

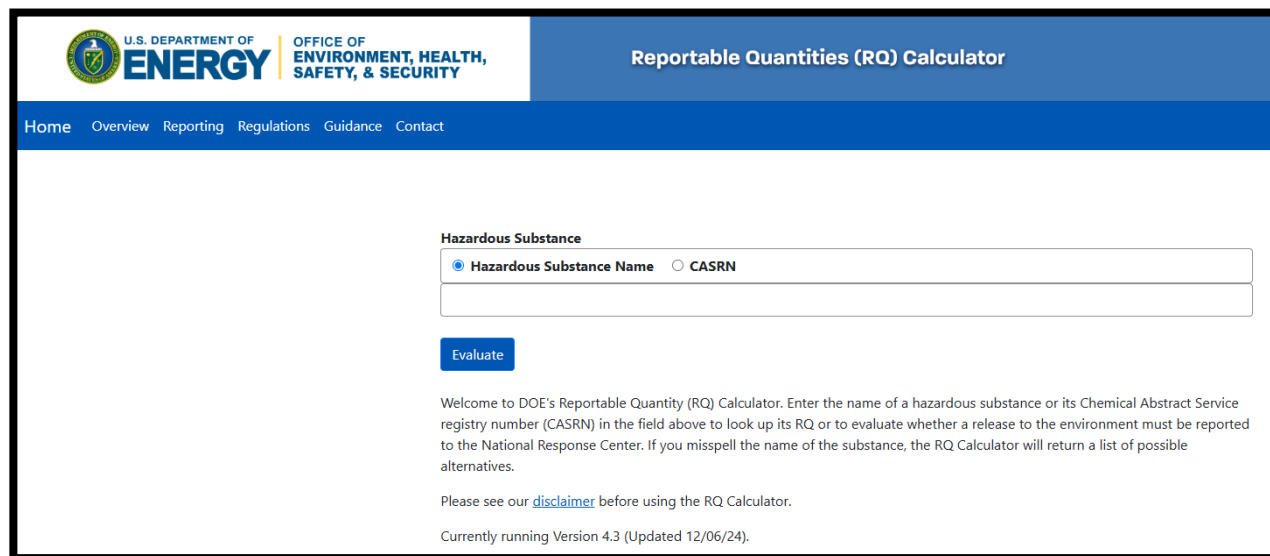
authorities). Since the calculator is web-based, it can be accessed at any time and can be used on computers, laptops, tablets and mobile phones. No special equipment or software is needed to use the calculator.

## 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).

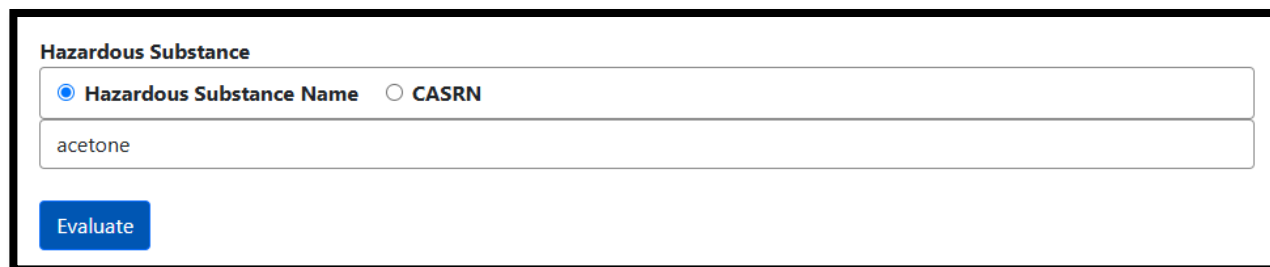


The screenshot shows the 'Reportable Quantities (RQ) Calculator' interface. At the top, there is a header with the U.S. Department of Energy logo and the text 'OFFICE OF ENVIRONMENT, HEALTH, SAFETY, & SECURITY'. Below this is a navigation bar with links: Home, Overview, Reporting, Regulations, Guidance, and Contact. The main content area features a 'Hazardous Substance' section with two radio buttons: 'Hazardous Substance Name' (selected) and 'CASRN'. Below these is a text input field. A blue 'Evaluate' button is positioned below the input field. At the bottom of the main content area, there is a welcome message: '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 is a link to the 'disclaimer' and a version statement: 'Currently running Version 4.3 (Updated 12/06/24)'.

Figure 1

### Step 2.

Select whether to search by Hazardous Substance name or CASRN. Input the name of the hazardous substance (e.g., acetone) or the CASRN number (e.g., 67641) in the search field, then click the 'Evaluate' button (Figure 2).



This screenshot shows a close-up of the 'Hazardous Substance' section. The 'Hazardous Substance Name' radio button is selected. The text input field below it contains the word 'acetone'. The blue 'Evaluate' button is visible at the bottom left of the section.

Figure 2

### Step 3.

From the results that are provided, click the 'Select' link for the hazardous substance that is applicable (Figure 3).

| Results                                                                                                                      |           |                               |       |                 |
|------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------|-------|-----------------|
| Substance                                                                                                                    | CASRN     | RCRA Waste No.                | Type* | Final RQ Pounds |
| <a href="#">Select</a> Acetone                                                                                               | 67-64-1   | U002                          | HS    | 5000            |
| <a href="#">Select</a> Acetone cyanohydrin                                                                                   | 75-86-5   | P069                          | HS    | 10              |
| <a href="#">Select</a> Bromoacetone                                                                                          | 598-31-2  | P017                          | HS    | 1000            |
| <a href="#">Select</a> (b) Acetone                                                                                           | 67-64-1   |                               | HS    | 5000            |
| <a href="#">Select</a> K022—Distillation bottom tars from the production of phenol/acetone from cumene                       |           | K022                          | HS    | 1               |
| <a href="#">Select</a> Acetone Cyanohydrin                                                                                   | 75-86-5   |                               | EHS   | 10              |
| <a href="#">Select</a> Acetone Thiosemicarbazide                                                                             | 1752-30-3 |                               | EHS   | 1000            |
| <a href="#">Select</a> Acetone Cyanohydrin                                                                                   | 75-86-5   |                               | EHS   | 10              |
| <a href="#">Select</a> Acetone Thiosemicarbazide                                                                             | 1752-30-3 |                               | EHS   | 1000            |
| * HS = CERCLA Hazardous Substance subject to 40 CFR 302.<br>EHS = EPCRA Extremely Hazardous Substance subject to 40 CFR 355. |           |                               |       |                 |
| <a href="#">Back</a>                                                                                                         |           | <a href="#">New Substance</a> |       |                 |

Figure 3

### 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 the 'Calculate' button (Figure 4).

| Results                                                                                                                      |                      |                                     |       |                 |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------|-------|-----------------|--|--|--|
| Substance                                                                                                                    | CASRN                | RCRA Waste No.                      | Type* | Final RQ Pounds |  |  |  |
| <a href="#">Select</a> Acetone                                                                                               | 67-64-1              | U002                                | HS    | 5000            |  |  |  |
| * HS = CERCLA Hazardous Substance subject to 40 CFR 302.<br>EHS = EPCRA Extremely Hazardous Substance subject to 40 CFR 355. |                      |                                     |       |                 |  |  |  |
| <a href="#">Back</a>                                                                                                         |                      | <a href="#">New Substance</a>       |       |                 |  |  |  |
| <b>Calculator</b>                                                                                                            |                      |                                     |       |                 |  |  |  |
| Amount Released:                                                                                                             | <input type="text"/> | <input type="text" value="Pounds"/> |       |                 |  |  |  |
| Time Period of Release:                                                                                                      | <input type="text"/> | <input type="text" value="Hours"/>  |       |                 |  |  |  |
| Percent of Mixture:*                                                                                                         | <input type="text"/> | <input type="text" value=" %"/>     |       |                 |  |  |  |
| *Percent of Substance in the total release (by mass).                                                                        |                      |                                     |       |                 |  |  |  |
| <a href="#">Calculate</a>                                                                                                    |                      |                                     |       |                 |  |  |  |

Figure 4

## Step 5.

The calculator will then display 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).

**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:  **Pounds**

Time Period of Release:  **Hours**

Percent of Mixture:\*  %

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

**Calculate**

Figure 5 - Example of a release amount that exceeds 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:  **Pounds**

Time Period of Release:  **Hours**

Percent of Mixture:\*  %

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

**Calculate**

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

## 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 to State, Local and Tribal entities; contacts for EPCRA reporting are also available on the [reporting tab of the RQ Calculator](#).

For questions regarding this Information Brief, please contact:  
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Office of Environment, Health, Safety and Security (EHSS)