



Collection Form for Respirable Crystalline Silica Objective Data

Purpose:

CPWR-The Center for Construction Research and Training is creating a database of respirable crystalline silica exposure data that construction contractors can use as objective data under OSHA's silica standard 29 CFR 1926.1153(d)(2)(ii).

Exposure monitoring data can be considered objective data only if specific information is gathered during the exposure monitoring process. If the information provided is sufficient, the data will be incorporated in CPWR's database. The enclosed "Respirable Crystalline Silica Objective Data Form" was developed to facilitate the collection of the required data and information. To ensure the confidentiality of individuals and organizations that contribute to this database, no personal identifiers, such as individual and company names, contact information, monitoring site location, etc., will be shared with anyone outside of the CPWR research team compiling this database. Only the data on equipment, tasks, and exposure conditions required to meet OSHA's definition of objective data will be shared.

How you can help:

As a safety and health professional, you can help CPWR compile a robust exposure database by:

- Completing the CPWR Respirable Crystalline Silica Objective Data Collection Form when conducting air monitoring. If you are gathering multiple samples under identical conditions, use one form per sample. You can fill out the front and back of the form for the first sample and the back only for each subsequent sample.
- Sending the completed form and a copy of the laboratory analysis report to CPWR at:

CPWR-The Center for Construction Research and Training
Attn: Sara Brooks
8484 Georgia Avenue, Suite 1000
Silver Spring, MD 20910-5618
Phone: (301) 578-8500
Fax: (301) 578-8572
Email: sbrooks@cpwr.com

If you have any questions or concerns, please contact Sara Brooks at (301) 495-8532

*CONTACT INFORMATION
Name:
Company:
Email:
Phone:



Respirable Crystalline Silica
Objective Data Collection Form

*DATE

***Note: All fields with an (*) are required**

SAMPLING LOCATION		
Site Name:	*State:	*Country:
Number of workers/Company Size:		
*Type of Worksite: <input type="checkbox"/> Active worksite <input type="checkbox"/> Simulated worksite <input type="checkbox"/> Laboratory		
*Project Type: <input type="checkbox"/> Renovation <input type="checkbox"/> Demolition <input type="checkbox"/> New Construction		
Comments:		

SAMPLING ENVIRONMENT			
*Environment: <input type="checkbox"/> Outdoor <input type="checkbox"/> Partial Enclosure ¹ <input type="checkbox"/> Indoor <input type="checkbox"/> Confined Space			
*Temperature (°F):	*Relative Humidity (%):	Wind Direction ² : <input type="checkbox"/> Upwind <input type="checkbox"/> Downwind <input type="checkbox"/> Crosswind	Wind Speed (mph):
Comments:		Other Ventilation Sources:	

WORK CONDITIONS
*Trade/Occupation (i.e. bricklayer, laborer):
*Task (i.e. cutting, grinding):
*Material Disturbed (i.e. block, brick, concrete):
Decontamination procedures:
Comments:

EQUIPMENT INFORMATION	
*Tool	*Control
	<input type="checkbox"/> Water <input type="checkbox"/> LEV <input type="checkbox"/> Combination (Water + LEV) <input type="checkbox"/> Enclosed Cab <input type="checkbox"/> Other _____
*Manufacturer:	*Manufacturer:
*Model:	*Model:
Wheel Diameter (if applicable):	Measured CFM (if applicable):
Power (hp/rpm):	Measured Water Flow Rate (if applicable):
*Good Working Order ³ : <input type="checkbox"/> Yes <input type="checkbox"/> No	*Good Working Order ³ : <input type="checkbox"/> Yes <input type="checkbox"/> No
Tool Comments:	Control Comments:

Respiratory Protection	
*Used: <input type="checkbox"/> Yes <input type="checkbox"/> No	Type: <input type="checkbox"/> filtering face respirator (N95) <input type="checkbox"/> half-face air-purifying respirator <input type="checkbox"/> Other _____
Comments (Other PPE):	

*CONTACT INFORMATION	
Name:	
Company:	

* = Required field

*DATE

SAMPLING DATA			
*Sample ID:	*Sample Type: Personal Breathing Zone	Collection Type:	Media ID:
Time:		*Flow Rate (L/min):	Total Air Volume (L):
On:	Off:	*Total Minutes:	
Comments:			

CALIBRATION DATA			
Sampling Pump:	Sampling Pump Serial No.:	Calibration method:	
Calibrator:	Calibrator Serial No.:	Annual Calibration Date:	
	Pre	Post	Average
Calibration Date:			
Flow Rate (L/min):			
Calibration Time:			

LAB ANALYSIS			
*Laboratory:	Total Respirable Dust ($\mu\text{g}/\text{m}^3$):		
*Method Used:	% Silica:		
Date of Analysis:	*Limit of Detection:		
*Total Respirable Crystalline Silica - ($\mu\text{g}/\text{m}^3$):	Quartz ($\mu\text{g}/\text{m}^3$):	Cristobalite ($\mu\text{g}/\text{m}^3$):	Tridymite ($\mu\text{g}/\text{m}^3$):

Note: Please return this form, a copy of the lab analysis report, and any additional notes you feel would be helpful to sbrooks@cpwr.com. The data will be considered for inclusion in CPWR's respirable crystalline silica database.

Sampling Instructions:

- Follow NIOSH 7500: Silica, crystalline, by XRD method
- Use pump calibrated with less than 10% error
- Collect personal breathing zone samples
- Preferred sampling duration: 240 minutes (160 – 590 minutes accepted)
- Samples should be representative of silica exposure from one task/control combination (i.e. handheld saw cutting block with LEV)
- Samples analyzed by an accredited lab.

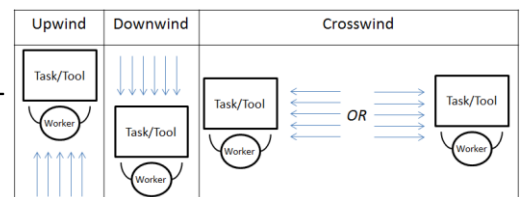
Other sampling methods may be considered with submitted justification. For more information on sampling and analysis see:

<https://www.cdc.gov/niosh/docs/2003-154/pdfs/7500.pdf>;
<https://www.osha.gov/dts/otpc/nrtl/nrtllist.html>

Term Definitions:

¹Partial enclosure – area with at least 2 walls, but less than 4

²Wind direction –



³Good working order – Operated and maintained in accordance with manufacturer's instructions to minimize dust emissions and/or

- integrated water delivery system that continuously feeds water to the blade.
- dust collection that provides air flow recommended by the manufacturer, or greater, and has a filter with 99% or greater efficiency and a filter-cleaning mechanism.
- ventilated booth that provides fresh, climate-controlled air to the operator, or a remote control station.