

Edwin L. Heim Company
Silica Exposure Written Control Plan



Effective Date: September 23, 2017

Overview

For the silica dust producing task(s) described below the Edwin L. Heim Company will use **Table 1** of OSHA's *Respirable Crystalline Silica Standard* to protect its workers from overexposure to respirable crystalline silica.

Purpose

The purpose of this written silica exposure control plan is to protect Heim employees from overexposure to respirable crystalline silica. Overexposure can lead to numerous health problems such as silicosis, lung cancer, chronic bronchitis, kidney disease, and autoimmune diseases. Therefore, the Edwin L. Heim Company will implement all applicable parts of **Table 1** to ensure that all affected workers:

- Use only equipment described in Table 1;
- Perform only the tasks described in Table 1;
- Implement all required engineering control methods established for each applicable piece of equipment/task described in Table 1;
- Implement all required work practice control methods established for each applicable piece of equipment/task described in Table 1;
- Implement all required respiratory protection functions; and
- Comply with the minimum Assigned Protection Factors (APF) for respiratory protection as described in Table 1.

Edwin L. Heim's Safety Director is the company's designated competent person for all silica related activities that affect Heim Employee's. The Job Foreman is responsible for implementation of this exposure control plan and will perform frequent and regular inspections of applicable areas of the jobsite, materials, and equipment to ensure that it is being properly implemented. The Job Foreman's responsibilities include, but are not necessarily limited to ensuring that:

- Affected workers are only using the equipment/performing the silica related tasks described in Table 1;
- Affected workers have received appropriate safety and health training on respirable crystalline silica generating tasks, accompanying hazards, and effective protective measures;
- Appropriate Table 1 engineering controls are established and properly implemented;
- Appropriate Table 1 safe work practices are established and properly implemented;
- Appropriate respiratory protection is used when required. When respiratory protection is required, Edwin L. Heim's Safety Director will ensure that minimum Assigned Protection Factors (APF) are being carefully followed, and respirator use is in compliance with all applicable respiratory protection standards;
- Housekeeping practices limit exposure to respirable crystalline silica as much as possible.

Silica Dust Producing Tasks

It has been identified that the Edwin L. Heim Company has the potential to perform the following silica dust producing tasks listed below. Please reference the assigned page numbers within this document to identify the specific control measures for each task listed.

- Handheld drill (impact and/or rotary hammer drill) **(see Page 3)**
- Rig mounted core drilling **(see Page 4)**
- Handheld power saw **(see Page 5)**
- Walk-behind saw **(see Page 6)**
- Jackhammering and handheld power chipping tools **(see Page 7)**
- Handheld grinding **(see Page 8)**

Affected Area Access Restrictions

The Edwin L. Heim Company restricts access by all others to areas where Heim employees are performing handheld power sawing, walk behind sawing, handheld grinding and jackhammering/chipping and restricts access to its own affected workers who must perform work in areas where other trades are pulverizing silica containing building materials.

- Prior to starting work on any project where respirable crystalline silica exposure is a concern the job foreman will meet with all other affected employers to determine whether Heim employees could be exposed to respirable crystalline silica from the work of other trades on the project. Where potential exposures are identified the job foreman will document the operations, their locations on the project, and when they will be performed.

Prior to starting work on any project where respirable crystalline silica exposure is a concern the job foreman will meet with all Heim employees onsite to inform them about the silica exposures on the project and the necessary affected area restrictions.

When Heim employees are performing the silica dust producing tasks listed in this section above:

- The affected work area will be barricaded with stanchions and yellow and black caution tape.
- The barricaded area will be large enough to prevent other trades in the area from overexposure to respirable crystalline silica, provided that they do not breach the barricade.
- Signs stating, "Caution – Silica" will be posted around the perimeter of the barricaded areas so that other trades will know why they should not breach the barricade.
- The Job Foreman will inform all other affected employers on the project about the silica generating tasks that will be performed by the Edwin L. Heim Company, their locations on the project and when they will be performed.

When Heim employees must work in close proximity to other trades that are pulverizing silica containing building materials:

- Affected Heim employees will not enter the work area but will report the issue to the job foreman.
- The Job Foreman will reschedule the work in the affected area to another time when exposure to respirable crystalline silica is not a concern.
- When work in the affected area can't be rescheduled, access to affected Heim employees will not be restricted but the job foreman will ensure that they are implementing the necessary safe work practices and protective measures to prevent overexposure to respirable crystalline silica in those work areas (e.g. respiratory protection).

Identified Task Specific Dust Control Measures

Description of Task: Handheld Drilling (Impact and/or Rotary Hammer Drill)

(Routine task, new task, indoors/outdoors, task found on Table 1)

Engineering Controls: Use drill equipped with a commercially available shroud or cowling with dust collection system.

Any deviation from Table 1 = air monitoring is required. Engineering controls must be used at all times.

Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter (HEPA) with 99% or greater efficiency and a filter cleaning mechanism. Use a HEPA filtered vacuum when cleaning holes.

Respiratory Protection: None.

Housekeeping: Dust containing silica on work surfaces/equipment must be cleaned up using wet methods or HEPA equipped vacuum, **no use of compressed air or dry sweeping** for removing dust and debris containing silica, dispose of used vacuum bags/silica contained dust in a closed sealed container.

Procedures Used to Restrict Access to Work Area: None.

Review this plan with all involved employees. Keep a copy of this plan at the jobsite. Provide this plan of action to the General Contractor. Review and update annually.

Additional Notes: None.

Identified Task Specific Dust Control Measures

Description of Task: Rig Mounted Core Drilling

(Routine task, new task, indoors/outdoors, task found on Table 1)

Engineering Controls: Use drill equipped with a commercially available shroud or cowling with dust collection system. Heim will utilize a Bit Buddy with a minimum of a 10 gallon commercial vacuum equipped with a HEPA filter and filter cleaning mechanism during core drilling operations.

Any deviation from Table 1 = air monitoring is required. Engineering controls must be used at all times.

Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Use a HEPA filtered vacuum when cleaning holes.

Respiratory Protection: None.

Housekeeping: Dust containing silica on work surfaces/equipment must be cleaned up using wet methods or HEPA equipped vacuum, **no use of compressed air or dry sweeping** for removing dust and debris containing silica, dispose of used vacuum bags/silica contained dust in a closed sealed container.

Procedures Used to Restrict Access to Work Area: None.

Review this plan with all involved employees. Keep a copy of this plan at the jobsite. Provide this plan of action to the General Contractor. Review and update annually.

Additional Notes: None.

Identified Task Specific Dust Control Measures

Description of Task: Handheld Power Saw (any blade diameter)

(Routine task, new task, indoors/outdoors, task found on Table 1)

Engineering Controls: Use saw equipped with integrated water delivery system that continuously feeds water to the blade.

Any deviation from Table 1 = air monitoring is required. Engineering controls must be used at all times.

Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.

Respiratory Protection: When used outdoors for less than 4 hours during your shift no respiratory protection required. When used outdoors greater than 4 hours during your shift, an APF 10 respirator is required.

When used indoors or in an enclosed area no matter the duration, an APF 10 respirator is required.

Housekeeping: Dust containing silica on work surfaces/equipment must be cleaned up using wet methods or HEPA equipped vacuum, **no use of compressed air or dry sweeping** for removing dust and debris containing silica, dispose of used vacuum bags/silica contained dust in a closed sealed container.

Procedures Used to Restrict Access to Work Area: The affected area will be barricaded with stanchions and yellow and black caution tape. The barricaded area will be large enough to prevent other trades in the area from overexposure to respirable crystalline silica, provided that they do not breach the barricade. Signage stating "Caution – Silica" will be posted around the perimeter of the barricade.

Review this plan with all involved employees. Keep a copy of this plan at the jobsite. Provide this plan of action to the General Contractor. Review and update annually.

Additional Notes: None.

Identified Task Specific Dust Control Measures

Description of Task: Walk Behind Saw

(Routine task, new task, indoors/outdoors, task found on Table 1)

Engineering Controls: Use saw equipped with integrated water delivery system that continuously feeds water to the blade.

Any deviation from Table 1 = air monitoring is required. Engineering controls must be used at all times.

Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.

Respiratory Protection: When used outdoors no respiratory protection required. When used indoors or in an enclosed area no matter the duration, an APF 10 respirator is required.

Housekeeping: Dust containing silica on work surfaces/equipment must be cleaned up using wet methods or HEPA equipped vacuum, **no use of compressed air or dry sweeping** for removing dust and debris containing silica, dispose of used vacuum bags/silica contained dust in a closed sealed container.

Procedures Used to Restrict Access to Work Area: The affected area will be barricaded with stanchions and yellow and black caution tape. The barricaded area will be large enough to prevent other trades in the area from overexposure to respirable crystalline silica, provided that they do not breach the barricade. Signage stating "Caution – Silica" will be posted around the perimeter of the barricade.

Review this plan with all involved employees. Keep a copy of this plan at the jobsite. Provide this plan of action to the General Contractor. Review and update annually.

Additional Notes: None.

Identified Task Specific Dust Control Measures

Description of Task: Jackhammering and handheld power chipping tools

(Routine task, new task, indoors/outdoors, task found on Table 1)

Engineering Controls: Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact **OR** use tool with commercially available shroud and dust collection system.

Any deviation from Table 1 = air monitoring is required. Engineering controls must be used at all times.

Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater and have a filter (HEPA) with 99% or greater efficiency and filter cleaning mechanism.

Respiratory Protection: When used outdoors less than 4 hours during your shift no respiratory protection required. When used outdoors greater than 4 hours during your shift, an APF 10 respirator is required. When used indoors or in an enclosed area no matter the duration, an APF 10 respirator is required.

Housekeeping: Dust containing silica on work surfaces/equipment must be cleaned up using wet methods or HEPA equipped vacuum, **no use of compressed air or dry sweeping** for removing dust and debris containing silica, dispose of used vacuum bags/silica contained dust in a closed sealed container.

Procedures Used to Restrict Access to Work Area: The affected area will be barricaded with stanchions, and yellow and black caution tape. The barricaded area will be large enough to prevent other trades in the area from overexposure to respirable crystalline silica, provided that they do not breach the barricade. Signage stating "Caution – Silica" will be posted around the perimeter of the barricade.

Review this plan with all involved employees. Keep a copy of this plan at the jobsite. Provide this plan of action to the General Contractor. Review and update annually.

Additional Notes: None.

Identified Task Specific Dust Control Measures

Description of Task: Handheld Grinding

(Routine task, new task, indoors/outdoors, task found on Table 1)

Engineering Controls: Use grinder equipped with commercially available shroud and dust collection system.

Any deviation from Table 1 = air monitoring is required. Engineering controls must be used at all times.

Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater airflow per inch of wheel diameter and have a filter (HEPA) with 99% or greater efficiency and filter cleaning mechanism.

Respiratory Protection: When used outdoors no respiratory protection required. When used indoors or in an enclosed area for greater than 4 hours during your shift, an APF 10 respirator is required.

Housekeeping: Dust containing silica on work surfaces/equipment must be cleaned up using wet methods or HEPA equipped vacuum, **no use of compressed air or dry sweeping** for removing dust and debris containing silica, dispose of used vacuum bags/silica contained dust in a closed sealed container.

Procedures Used to Restrict Access to Work Area: The affected area will be barricaded with stanchions and yellow and black caution tape. The barricaded area will be large enough to prevent other trades in the area from overexposure to respirable crystalline silica, provided that they do not breach the barricade. Signage stating "Caution – Silica" will be posted around the perimeter of the barricade.

Review this plan with all involved employees. Keep a copy of this plan at the jobsite. Provide this plan of action to the General Contractor. Review and update annually.

Additional Notes: None.

Review/Evaluation of this Silica Exposure Written Control Plan

The Edwin L. Heim Safety Director will evaluate the effectiveness of this written silica exposure control plan at least annually, and update it as necessary to keep affected workers from overexposure to respirable crystalline silica.