

# Job Hazard Analysis

JHA Name: Abrasive Blasting Cabinet



Assessment Date: 12-18-13

Revision Date: 04-04-17

Building or Location: North Mankato Campus

Department or Program: Ag Mechanics Program

Description of Individual Tasks or Assignments:

Abrasive Blasting Tasks (e.g., Smoothing or Roughening Surfaces, Removing Paint and Contaminants, Shaping Material, Glass Etching, etc...).

Tools, Equipment, or Machinery Used when Performing Task:

Abrasive Blasting Cabinet, and Abrasive Blast Materials

Hazard Type(s) Associated with Task or Assignment:		Check for Exposure:	Specific Hazard Exposure:	Check if Exposure Recommends or Requires a Style of PPE?
1	<b>Impact</b> <u>Example:</u> Person(s) can strike an object, or be struck by a moving or flying/falling object (e.g., fragments, chips, particles, sand, dirt/debris).	X	Potential exposure to impact hazards generated by compressed air abrasive blasting stream (e.g., injuries to hands & arms)	X
2	<b>Penetration or Cut</b> <u>Example:</u> Person(s) can strike an object, be struck by an object, or fall upon an object or tool that would cut or otherwise break the skin.			
3	<b>Crush or Pinch</b> <u>Example:</u> An object(s) or equipment/machine may crush or pinch a body or body part			
4	<b>Chemical or Harmful Dust</b> <u>Example:</u> Exposure to chemicals (i.e., hazardous substances and harmful physical agents), infectious agents from spills, splashing, physical contact, and/ or exposure to dusts, vapors, fumes, or gases that could cause illness, irritation, burns, asphyxiation, breathing/vision difficulty, sensitization, infection, or other toxic health effects (i.e., acute or chronic). Note: "May also have or create ignition potential."	X	Potential exposure to abrasive blasting dusts, however glass beads are used with this cabinet which would negate the dust factor (e.g., respiratory irritation and illness), potential exposure to contaminates on work piece surfaces (e.g., dependent on surface coatings of work pieces)	X
5	<b>Heat</b> <u>Example:</u> Exposure to radiant heat sources, sparks, and splashes or spills of hot material			
6	<b>Light (optical) Radiation</b> <u>Example:</u> Exposure to strong light sources, glare, or intense light exposure which is a byproduct of a process. Note: "This category may also include hazards presented from lack of light (e.g., working in dark spaces/areas)."			
7	<b>Electrical Contact</b> <u>Example:</u> Exposure, contact, or proximity to live or potentially live electrical objects.			
8	<b>Ergonomic/ Human Factors</b> <u>Example:</u> Working in cramped spaces, repetitive movements, awkward postures, vibration, heavy lifting, etc... Note: "This category may also include unique hazards presented from tasks that require demanding or challenging degrees of mental and/or physical effort to be exerted by an individual. See <i>Physical Effort Definition/Examples</i> category for further explanation of physical effort."			
9	<b>Environmental</b> <u>Example:</u> Exposure to noisy environments, hot or cold work environments, poor weather conditions, working at a height, and any other conditions in the workplace that could cause danger, discomfort, and/or negative health effects.	X	Potential exposure to loud/ prolonged noise (abrasive blasting cabinet)	X

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**Personal Protective Equipment Requirements:**

<b>Eyes &amp; Face:</b>	Safety Glasses with Side Shields or Goggles (Required when operating Abrasive Blast Cabinets)
<b>Head &amp; Ears:</b>	Hearing Protection Devices (Required when operating Abrasive Blast Cabinets)
<b>Whole Body:</b>	
<b>Feet:</b>	
<b>Hands:</b>	Abrasive Blasting Cabinet Gloves- "attached to cabinet" (Required when operating Abrasive Blast Cabinets)
<b>Respiratory:</b>	1/2 Mask Respirators (Required when working in areas of where hazardous contaminate levels exceed OSHA PELs and When Cleaning or Adding Abrasive Media to Cabinet)
<b>Other:</b>	

**Other Control Measures or Requirements (Engineering & Administrative Controls):**

**#1) Impact Hazards:** Never point an abrasive nozzle/gun or direct its stream towards yourself. **#4) Chemical or Harmful Dust Hazards:** Personnel should receive Right-to-Know training (e.g., regarding chemical & physical hazards). SDS should be provided/available for all hazardous chemicals. Local Exhaust Ventilation (LEV) should be provided/maintained on abrasive blast cabinets. Respirators are available for personnel experiencing respiratory discomfort from dust generated; however, personnel (desiring to use respirators) and personnel required to wear respiratory equipment should receive a medical evaluation, Respirator training (e.g., regarding respiratory hazards), and fit-testing prior to wearing respirators. Respiratory equipment must be worn when cleaning the cabinet or adding abrasive materials. Never use abrasive cabinets with their access doors open. Only open the abrasive blast cabinet's doors when the abrasive dust has been removed from the cabinet by the LEV. **#9) Environmental Hazards:** Personnel should receive Hearing Conservation training (e.g., regarding noise hazards). Personnel using compressed air for cleaning/drying should be included in the Hearing Conservation Program. **Miscellaneous Considerations:** Dead-man switches or constant pressure triggers must be equipped on all abrasive nozzles/guns to stop air flow if the nozzle is released or dropped. Operators of tools, equipment, and machinery should read and follow all Manufactures' recommendations/requirements (e.g., inspections, servicing/ maintenance, safe usage, etc...). Any tools, equipment, or machinery found damaged, defective, or otherwise unsafe should immediately be removed from service and not used until repaired or replaced. Personnel should always consult their Supervisors on the selection and use of PPE for the tasks being performed.

**Physical Effort Definition/Examples**

**1.) Physical Mobility-** Movement from place to place on the job, considering distance and speed **2.) Physical Agility-** ability to maneuver body while in place or in static position **3.) Physical Strength (Light to Moderate)-** Ability to handle routine office materials and tools **4.) Physical Strength (Moderate to Heavy)-** Ability to handle 50lbs+ objects, considering frequency **5.) Dexterity-** skill and ability in using hands, fingers, and feet **6.) Physical Balance-** ability to maintain balance and physical control **7.) Coordination-** harmonious functioning of body parts (e.g., eye/hand, hand/foot, etc...) **8.) Endurance-** ability to sustain a prolonged stressful effort or activity with limited opportunity to rest

Note: "This JHA provides only the minimum PPE/safety requirements necessary to safely complete the task or assignment, and the JHA only covers the hazards or exposures that are most likely to be encountered. Nothing within this JHA bars or restricts personnel from requesting higher degrees of PPE or control to mitigate workplace hazards. In addition, South Central College personnel (e.g., employees and students) are required to complete any applicable safety or on-the-job trainings required prior to performing their positions or participating in their programs of study. Finally, South Central College personnel should consult their supervisors/instructors, the college's written safety programs/policies, and/or the Security & Safety Director whenever they have questions or concerns."

**Certification: This document certifies a hazard assessment was conducted meeting the provisions specified under 29 CFR 1910.132 (d) and South Central College's related safety programs and policies.**

Name: Al Kluever

Date: 04-04-17