

Code of Work Practices



**1225 Lakeview Dr.
Chaska, MN 55318**

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Code of Work Practices

Cal/OSHA requires that every employer adopt a written Code of Safe Practices that is specific to operations performed. This Code of practices was designed to address the hazards common to our industry, and communicate safe work practices and company expectations

The Berg Group is committed to providing a safe and healthful work environment for each employee while maintaining sound, profitable approaches to business solutions. We shall make every reasonable effort to safeguard our employees, customers, stakeholders, communities and the environment from risk inherent to our operation. The Berg Group strives to maintain a ZERO incident/accident record and will meet or exceed all OSHA or state applicable regulations.

A copy of the company Code of Work Practices will be accessible at all job site locations. Any questions regarding The Berg Group Code of Safe Practices should be directed to our Safety Director at 605-380-1161.

David Derzab

David Derzab
National Safety Director
The Berg Group

Safe Work Practices

SECTION 1: General Rules for the Jobsite

1. All disruptive activities usually referred to as "horseplay" are forbidden and could be grounds for termination.
2. For the protection of all, warning signs such as "Eye Protection Required", "Hearing Protection Required", and "Laser in Use" will be posted wherever possible and are considered part of the Safety and Health Program. All employees shall obey these directions and aid in maintaining them.
3. All equipment will be used for its designated purpose only.
4. You are to report to work rested and physically fit for your job.
5. Rings and jewelry shall not be worn while operating equipment if there is a potential hazard to the employer.
6. When longer hair is worn, it must be contained under a hat or hair net to prevent entanglement in our equipment.
7. Electrical cords shall be kept out of aisles and walkways and restrained so they do not constitute a tripping hazard.
8. Any extension cords with nicks or cuts are to be discarded immediately.
9. Report all accidents to your supervisor immediately whether anyone is hurt or not. In cases of injury, get first aid and/or medical treatment as soon as possible.
10. Report all unsafe conditions and unsafe acts to your supervisor or manager so that corrective action can be taken.
11. Do not perform an operation which you feel places you or other employees are in potential danger.
12. The use of or being under the influence of intoxicating beverages or illegal drugs or prescription drugs while on the job is prohibited.
13. Shut down, lockout, and/or tag-out machines before cleaning, adjusting, or repairing, according to company standards.
14. Use safe work practices, proper tools and equipment always. Never use defective tools or equipment.
15. Pressure cylinders must be secured in an upright position always.
16. When utilizing heat-producing equipment, make sure the area is clear of all combustible materials.
17. Aisles and passageways must always be kept clear.
18. Physical violence against another employee is strictly prohibited.
19. No driver shall operate a company vehicle when his/her ability to do safely has been impaired, affected or influenced by alcohol, drugs, medication, illness, fatigue, or injury.
20. All drivers and passengers operating or riding in company vehicles must wear seat belts and shoulder straps, if provided (even if air bags are installed).
21. Inspect electrical extension cords and other wiring to be certain they are properly insulated. Do not use frayed or damaged cords.
22. Follow the safe job procedures established by your supervisor. You are to perform only those jobs you have been assigned and properly instructed to perform.
23. Wear the protective equipment required for the task at hand. It is your responsibility to see that protective equipment should be in good repair. Damaged equipment should be reported to our supervisor immediately.

SECTION 2: Tools and Equipment

1. Employees are responsible for maintaining equipment in proper working order. This includes inspecting and cleaning equipment. If equipment is damaged or defective, it must be reported to the Foreman. The Superintendent must then be informed, and the equipment returned to them for repair or for an on-site repair.
2. When working on equipment or machinery, the employees must ensure that it is isolated from all potentially hazardous energy before performing service or maintenance. This hazardous energy may include; unexpected energization or start up and release of stored energy (i.e. unplugging tools, chocking tires) (See Lockout/Tagout procedure).
3. Use tools for their intended purpose and in the manner intended.
4. All power tools and electrical devices must be properly grounded.
5. Keep guards and protective devices in place always. Never use equipment or tools from which guards have been removed.
6. Do not use electric power tools and equipment when standing in water.
7. Only qualified persons are to repair electric tools or equipment.
8. All extension cords shall be 3-pronged type and made for hard use.
9. All defective extension cords must be discarded if they are missing a ground pin; have cuts in the outside sheathing; crushed; or wires are exposed.
10. "Lasers in Use" signs must be posted when lasers are in use.
11. Do not operate power tools or equipment unless you have been authorized to do so.
12. Inspect tools daily to ensure that they are in proper working order. Do not use damaged or defective tools.

- **Rigging**

1. Only trained riggers designated by The Berg Group can rig loads to Mobile or Tower Cranes
2. Rigging equipment shall be inspected prior to each use and as necessary during its use to ensure safety.
3. Rigging equipment shall not be loaded more than its recommended safe working load.
4. Know the center of gravity of the load.
5. Select sling best suited for load.
6. Protect sling from sharp surfaces.
7. Protect load from rigging if necessary.
8. Allow for increased tension caused by the sling angles.
9. Equalize load on multiple leg slings.
10. Attach tag lines prior to lift if required.
11. Keep personnel clear of lift area.
12. Lift load a few inches and check rigging.
13. Know limitation of hoisting device.
14. Start and stop slowly.
15. Watch for obstructions.
16. Use proper hand signals.
17. Maintain load control.
18. Safety latches will be provided on all hoist hooks used on hoists that travel with load attached.
19. Maintenance will inspect cranes, hooks, and slings monthly and document that information.
20. Overhead cranes will be inspected for deficiencies. If deficiencies exist, the crane will be taken out of operation until corrected.

- **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Whenever practical, personal protective equipment (PPE) must be used to provide additional security from accidental injuries. Employees are expected to be responsible for and care for personal protective equipment.

1. EYE PROTECTION:
 - a. Safety glasses must be worn always.
 - b. A welding helmet with proper lenses must be worn when performing welding operations.
 - c. Eyes and Face – An approved welding hood with a minimum number 10 lens is required when a shielded metal arc welder is in use (If danger of flash exists, the welder is required to wear long sleeved shirts and gloves). Employees working in an area when metal arc welding is in progress are required to be shielded from the arc welding flash.
2. RESPIRATORY PROTECTIVE EQUIPMENT will be provided and used by designated employees when engineering or administrative controls are not effective in controlling hazardous conditions.
3. HEARING PROTECTION will be provided and worn on all jobs where the noise level exceeds OSHA's permissible noise exposure limit.
4. HAND PROTECTION: Appropriate glove protection is required during demolition work. Cut resistant gloves with a rating of 4 or higher as well as Kevlar sleeves is mandatory.
5. CLOTHING PROTECTION: Wear clothing that is suitable for your work. Shirts and long pants are required.
6. FOOT PROTECTION: Boots are required.
7. HEAD PROTECTION: Hard hats must be worn always on all sites.

- **CHIPPING, CUTTING AND GRINDING**

1. Eye & hearing protection will be used whenever cutting with a chop saw.
2. Gloves will be worn when wire brushing.
3. Aware of your work environment to protect fellow workers from flying sparks.
4. Face shield and hearing protection are required when using a partner saw or grinder.
5. Don't face a chop saw or partner saw towards a window. Sparks may pit the glass windows and will need to be replaced.
6. Grinding shall not be done in explosive/flammable atmospheres.

- **WELDING**

1. Appropriate eye protection or shielding is required when welding.
2. Only standard electric arc welding equipment such as generators, motor generator units, transformers, etc., conforming to the requirements of the National Electrical Manufacturer's Association or the Underwriters Lab, Inc., or both, should be used.
3. All electric welding machines shall be properly grounded, and all electrical cables inspected prior to use for damage, excess fraying and loose connections.

4. Where it is necessary to couple several lengths of cable for use as a welding lead circuit, insulated connectors should be used on both the ground and electrode holder lines if occasional coupling or uncoupling is needed.
5. Wherever practical, shield anyone in work area from the direct rays of the arc; barricade hot material.
6. Regulators and gauges shall only be repaired by qualified employees.
7. All work areas shall be free of trash and debris before welding, cutting, or hot work operation can begin.
8. Welding curtains must be used when a danger exists to other employees from welding or hot work.
9. Check for flammable or combustible material in containers before placing hot welded parts in container.
10. All combustibles, including product, dust, flammable/combustible liquids, gases, etc., will be kept a reasonable distance from welding or hot work operation or covered with a non-combustible material.
11. Fire Extinguishers must be within 25 feet from a welder. If you're in a lift, the fire extinguisher must be with you.

- **FIRE PROTECTION**

Firefighting equipment must be conspicuously located and readily accessible always.

1. Familiarize yourself with the location and use of all firefighting equipment.
2. Firefighting equipment shall be inspected so that all equipment is maintained and in operating condition.
3. Report damaged or missing equipment to your Foreman/Superintendent or Safety Director.
4. Tampering with or unauthorized removal of firefighting equipment from assigned locations is prohibited.
5. Extinguishers and hydrant and fire doors must be kept clear of stored and readily accessible always.
6. Smoking is forbidden when refueling equipment. Obey all signs that indicate "NO SMOKING".
7. Only small quantities of flammable liquids are to be stored and dispensed from UL listed safety cans.
8. Only UL listed safety cans shall be used and the cans shall be properly labeled.
9. Flammables will be stored in approved flammable cabinets or approved storage vaults.
10. Firefighting equipment will be inspected by a qualified inspection service contractor on an annual basis.

- **MANUAL LIFTING AND MATERIAL HANDLING**

The major cause of injuries includes improper lifting and handling of objects, tripping, slipping, or falling. The following procedures must be followed to avoid injury.

1. Prior to lifting or moving an object, test the weight of the load to make sure that it can be moved safely. Use material handling devices such as; carts or slings or seek assistance.
2. To reduce the incident of slipping, tripping, or falling; check the path of travel or destination to make sure it is clear. Clear the path, if needed, before moving the object and avoid stepping on slippery or uneven surfaces.
3. Use a wide balanced stance to reduce the likelihood of slipping or jerking movements.
4. Keep the lower back and neck in its normal arched position while lifting; bend at the knees or hips to maintain the normal arched position. Keep your head up.
5. Bring the object or load as close to the body as possible. This keeps your back from acting as a fulcrum and reduces stress on it.
6. Keep the head and shoulders up as the lifting motion begins. This helps maintain the arch in the lower back.

7. Tighten the stomach muscles as the lift begins. This causes the abdominal cavity to become a weight bearing structure, thus unloading the stress on the spine.

- **HOUSEKEEPING**

A work area must be kept clean and orderly if it is to be safe and pleasant to work in. Housekeeping is a responsibility shared by all employees.

1. Remove combustible scrap and debris at regular intervals. Dispose of them in approved metal containers.
2. Covers are required on containers used for flammable or harmful substances.
3. At the end of each job, return all tools and excess material to proper storage.
4. Stack and unstuck material in an orderly manner to prevent it from collapsing.
5. Keep isles and walkways clear and in good repair.
6. Spills of oil, grease, or other material must be removed immediately.
7. Areas around saws or other wood or steel working equipment shall be kept clean and free of excess debris, scrap, chips and sawdust.
8. Paper drinking cups, pop cans, lunch debris, and trash shall be placed in appropriate trash containers.
9. All protruding nails in pallets must be removed or bent over.
10. Remember, a clean work area is a safe work area.

- **STAIRWAYS AND LADDERS**

11. Stairways or ladders are required in all access areas where there is a break in elevation of 19 or more inches.
12. All access areas must be always kept clear.
13. If 25 or more employees need access to a ladder, then a double cleated or two or more ladders are required.
14. Rungs, cleats, and steps must be uniformly spaced 10 to 14 inches apart.
15. Step ladders must have a locking device.
16. Writing on ladders can only be done on the side rails.
17. Portable ladders must be able to withstand 4 times the maximum intended load and rails must be 11 ½ inches apart. Metal ladders must be slip resistant. NEVER USE THE TOP STEP.
18. All ladders must extend 3 feet from upper landing surface.
19. Ladders must be used for their intended use only.
20. Use only on stable ground. If used on slippery surface; use a ladder with slip resistant feet.
21. Conductive ladders should never be used near a power source.
22. Do not move ladder when in use.
23. Never place a ladder in a doorway unless it is barricaded.
24. Ladders need to be inspected prior to each use. Any damaged ladders can be repaired meeting original condition. Un-repairable ladders need to be red tagged or discarded.
25. Two or more ladders reaching elevated work must be offset with platforms.
26. Never use cross bracing as a step.
 - a. Ladders used by an open stairway, window, or mezzanine (with a fall greater than six (6) feet) require you to wear fall protection.

SECTION 3: Motorized Lifts and Scaffolds

- **Motorized Lifts**

All our powered industrial trucks must meet ANSI B56.1-1975 and bear a label of the appropriate testing laboratory. Modifications or additions, affecting capacity or safe operation, is not permitted. The weight handling capacity must be clearly marked on each truck. All powered industrial trucks capable of lifting the load over the head of the operator must be equipped with an overhead guard.

- **TRAINING**

Training consists of classroom instruction, performance testing, and a written test. Provided by Local Union. Certification can be provided at request on site.

- **TRUCK OPERATIONS/SAFETY RULES**

1. The operator shall inspect the truck before driving it. The Daily Inspection Checklist must be completed. Report any defects to your Foreman. Do not operate the truck until defects are repaired.
2. Operators shall be aware of housekeeping hazards or obstructions on the route of travel.
3. Do not load the truck over its rated load capacity.
4. Make sure loads are stable and securely fastened before moving them.
5. Always travel at a safe speed for existing conditions.
6. Avoid sharp and fast turns. You have a short turning radius on the rear wheels. Loads can shift and cause the entire truck to tip over.
7. Lower forks when truck is parked or when clearance is in question.
8. Keep loads low to avoid visual obstructions or "tipping".
9. **NEVER** raise or lower load while moving.
10. For high clearance loads, drive backward and face in the direction of travel.
11. Drive backwards down slopes with more than 10% incline. If parking is necessary on a slope, always block wheels, lower the forks, and set the parking break.
12. Observe defensive driving techniques by approaching corners, crossings, and line spots with caution. Check convex mirrors when installed.
13. Stabilize truck/trailer wheels prior to entry. Check to ensure "chock blocks" are in place. Check to see that dock plates are secure.
14. **NEVER** carry riders on your vehicle. If lifting personnel, use a safety platform secured to the fork.
15. **NEVER** allow the lift truck to be operated with the mast over the other employees.
16. Observe all clearance signs.
17. **NEVER** place your load in an aisle, in front of a stairway, first aid, or fire protection equipment.
18. When lift is unattended, the forks must be lowered, controls set to neutral, power shut, and the parking brake applied. Make sure fork tines are not a trip factor.
19. When moving the forklift over eight (8) feet, the fork tines must not be over 14 inches above the floor.
20. When raising or lowering items, the fork yoke must be brought back to stabilize the forklift.
21. When lowering heavy items such as a pallet of salt, special care is to be taken because lowering too fast with a quick stop can cause a forklift to bounce and tip.
22. Operators shall report to their Superintendent/Foreman or Safety Director all accidents involving injury, property damage, or near miss.
23. Testing of airborne carbon monoxide fumes will be conducted on a quarterly basis to determine if airborne quantities exceed OSHA's PEL.
24. Testing of tailpipe exhaust gas will be conducted on a regular schedule to document that exhaust gas meets OSHA requirements.

- **SCAFFOLDING**

1. Scaffold and scaffold components shall be capable of supporting, without failure, its own weight and at least four times the maximum intended load.
2. Scaffolds shall be designed by a qualified person and shall be constructed and loaded in accordance with that design.

- **Platform Construction**

3. Each platform on all working levels of scaffolds shall be fully planked and decked between the front uprights and the guardrail supports.
4. Each scaffold platform or walkway shall be at least 18 inches wide.
5. The front edge of all platforms shall not be more than 14 inches from the face of the work unless guardrail systems are erected or personal fall arrest systems are used.
6. Wood platforms shall not be covered with opaque finishes.
7. Scaffold components manufactured by different manufactures shall not be intermixed unless they fit together without force.

- **Criteria**

8. Scaffolds with height to base width ratio of more than 4:1 shall be restrained from tipping by guying, tying, bracing, etc.
9. Scaffold poles, legs, frames, shall bear on base plates, mudsills, or other adequate foundation.
10. Footings shall be level, sound, rigid, and capable of supporting the loaded scaffold without settling.
11. Unstable objects shall not be used to support scaffolds.

- **Scaffold Access**

12. Scaffold Inspections are to be done daily & any corrections needed, will be made before access is granted.
13. Cross braces and scaffold frames must not be used for access unless designed to be used as a ladder.
14. Portable, hook on, and attachable ladders must be positioned so as not to tip the scaffold.
15. Straight ladders can also be used to gain access.
16. Effective September 2, 1997, access for associates erecting or dismantling scaffolds shall be provided a safe means of access. The employer shall have a competent person determining whether it is feasible or would pose a greater hazard to provide and have associates use a safe means of access.
17. Hook on or attachable ladders shall be installed as soon as possible.

- **Scaffold Use**

18. Scaffolds and scaffold components must not be loaded more than their maximum intended loads or rated capacities, whichever is less.
19. Scaffolds and components must be inspected for visible defects by a competent person before each work shift, and after any occurrence, which could affect a scaffold's structural integrity.
20. Scaffolds must not be moved with workers on them, unless they have been designed specifically for such movement.

21. Scaffolds must be erected, moved, dismantled, or altered only under the supervision and direction of a competent person.
22. Work from scaffolds is prohibited during storms or high winds unless your competent person has determined it is safe and you are protected by a personal fall arrest system or wind screen.
23. Debris must not be allowed to accumulate on platforms.
24. Makeshift devices, such as, but not limited to boxes, barrels, ladders, etc., shall not be used to increase your working level height.
25. Working levels that are six (6) feet above ground will trigger the height for person fall protection.

- **SELF-PROPELLED WORK PLATFORMS (Scissors Lift)**

Pre-start Checks

26. Be sure batteries are fully charged.
27. Make sure battery charger plug is disconnected.
28. All grease fittings should be fully greased.
29. Check for any obstacles around the work platform and in the path of travel; such as holes, drop offs, debris, ditches, soft fill, etc.
30. Be sure that the freewheeling valve and emergency lowering valves are closed.
31. Check overhead clearance.
32. Visually inspect and functionality test before use and inform your Foreman if there is a malfunction.

Safe Operation

33. The platform is to be used on hard level surfaces only.
34. Never overload the maximum intended load.
35. Do not use within ten (10) feet of high voltage lines.
36. Do not use without railings or entrance chains.
37. Never use if the work platform is not operating properly.
38. All work must be done on the platform only; never adjust the width, length or height by any means (ex. Ladders).
39. All gates must be closed, and chains hooked before operating the lift.
40. If your feet leave the lift platform; fall protection must be utilized.
41. 100% of fall protection must be worn while operating boom lifts.

Shutdown

42. Completely lower the platform.
43. Remove key & control box.
44. Check battery water level and place batteries on charge, if needed.

SECTION 4: Machinery and Vehicles

- **VEHICLE OPERATION REQUIREMENTS**

1. Only licensed and Berg authorized individuals may operate Company owned or leased vehicles, receive an auto allowance, or haul equipment/material on behalf of Berg.
2. Authorized Driver is responsible for ensuring that **only they** can operate a Berg owned or leased vehicle. The Authorized Driver is liable for **all damages and losses** to the vehicle incurred by any other Driver.

3. Drivers must have a valid drivers' license in their state of residence, be 21 years of age, meet state licensing requirements, have a minimum of 1-year experience in class of vehicle operated and have a driving record that meets requirements in Berg's Fleet Drivers' Policy.
4. All employees who will be operating a Company owned or leased vehicle, receiving an auto allowance, or haul equipment/material on behalf of Berg will be required to submit a photocopy of their current driver's license. A Motor Vehicle Record will be conducted annually.
5. Employees receiving an auto allowance or hauling equipment/material on behalf of Berg must provide proof of insurance. If a current certificate of insurance is not on file, the employee is not authorized to operate a vehicle for company purposes. Employees must update insurance certificates whenever the previous certificate expires or annually, whichever comes first.
6. State Motor Vehicle Records (MVR's) will be obtained and evaluated at least annually as part of the selection process of authorizing employees who drive Company owned or leased vehicles, receive an auto allowance, or haul equipment/material on behalf of Berg.
7. All Drivers who operated Company owned or leased vehicles, receive an auto allowance, or haul equipment/material on behalf of Berg will report all accidents, moving violations or the revocation or suspension of a driver's license to a Berg Officer immediately.
8. Absolutely NO driving a vehicle under the influence of drugs and/or alcohol.
9. Any Driver convicted of a DWI/DUI will be subject to suspension of driving privileges of Berg Group Vehicles. The Berg Group reserves the right to bypass protocol to determine the severity and extent of the suspension of the violation.
10. Berg has the right to terminate driving privileges to any Driver based on unacceptable driving records. In some cases, this may be termination of employment.
11. All traffic laws must be obeyed.
12. Always check behind your vehicle before backing up. If necessary, get out of the vehicle and inspect the area or have a co-worker assist in backing up.
13. Do not take chances; to drive safely is more important than to arrive on time.
14. All Drivers who operate a Berg owned or leased vehicle are responsible for ensuring required preventative maintenance activities (oil changes) are performed on a timely basis (every 3000 miles) and at a reasonable cost.
15. If mechanical repairs are needed for company owned or leased vehicles, do not operate the vehicle until necessary repairs have been made. Notify Management immediately for proper repair authorization.
16. Never leave a company owned or leased vehicle unattended, idling, or running.
17. All company owned, or leased vehicles shall be shut off when refueling.
18. No driving company owned or leased vehicles on frozen lakes or rough terrain.
19. All drivers of a company owned, or leased vehicle must own a secondary vehicle.
20. All DOT regulated drivers must pass a DOT drug test and complete and pass a physical prior to vehicle operation.
21. All DOT regulated drivers must comply with the Driver's Hours of Service (49 Part 395) Should the driver not comply, they will be subject to disciplinary procedures outlined in The Berg Safety Program.
22. All company vehicles shall have a current insurance card located in the glove compartment of the vehicle always.
23. **In case of an accident with a company vehicle:**
 - Stop Immediately – if possible, pull off the traveled portion of the roadway.
 - Warn other motorist – actuate emergency flashers.
 - Assist any injured person, but do not move them unless they are in danger of further injury.
 - Call the Police **(9-1-1)**.
 - If someone is injured, request medical assistance.
 - Notify Dave Derzab (605) 380-1161
 - Take pictures of the accident scene and any damages to the other vehicle involved.
 - Make no comments regarding fault or liability.

- Do not argue with other parties.
- 24. Get all facts you can and document as much information as you can.
- 25. **Exchange information with the other driver(s) involved:**
 - ✓ Make/Model/Color of the other vehicle(s) involved.
 - ✓ Insurance Information (be sure you examine the card).
 - ✓ Driver(s) License Number(s) and License Plate Number(s).
 - ✓ Driver(s) Phone Number(s) and Mailing Addresses.
 - ✓ Witness Name(s) and Addresses (obtain as much information as possible).
- 26. Vehicle operation requirements are reviewed annually.

SECTION 5: Electrical Safety

Most electrical shock injuries result from ground faults. The most common ground faults exist when insulation on wires within the tool become damaged, frayed or wet permitting current to leak out and energize the tool housing or frame. Normally, electrical current flows into a tool through an energized wire and returns to the ground through a neutral wire. When the tool is touched, some current is diverted from the normal hot-to-ground path and passes through our body.

Incidents involving temporary power on construction sites can be prevented by using a Ground Fault Circuit Interrupter or having assured equipment grounding conductor program. The best system is the Ground Fault Circuit Interrupter (GFCI) program. A GFCI outlet protects the individual using the tool and anyone in between should a power cord get cut or damaged.

The heart of the GFCI system is a sensor that monitors the amount of current passing through the energized wire and the amount of returning current via the neutral wire. If less is returning than went out, a ground fault occurs. This causes the sensor to trip the switch, cutting off power. GFCI's can sense a current leak of 5 milliamps.

Electrical Ground Fault Prevention Techniques:

1. All portable electrical tools and equipment must be grounded or of the double insulated type.
2. All extension cords must have grounded conductors and insulation that is in good condition.
3. Damaged tools or cords must be tagged and taken out of service until properly repaired.
4. Use of metal ladders is prohibited in areas where the ladder or the person using the ladder could meet energized parts of equipment, fixtures or circuit conductors.
5. Exposed wiring and cords with frayed, cut or deteriorated insulation must be repaired or replaced.
6. In wet or damp locations, electrical tools and equipment should be appropriate for the use or location. Make sure all outlets are grounded, have a GFCI in place, and the tool is grounded or double insulated.
7. Inspect all electrical equipment before using. Use only approved equipment that is in good condition.
8. Start and end electrical equipment from the "OFF" switch position. Do not leave the equipment in the "ON" position and use the plug to turn the equipment on and off.
9. Do not yank on the cord to unplug the tool or use the cord as a means of lifting the tool.
10. **Never** turn enter an electrical box without permission from the site GC.
11. **Never** turn of power without direct permission from the site GC.

SECTION 6: Hazard Communication

- **INTRODUCTION**

The Berg Group (i.e., Berg Drywall/Berg Plastering/Berg Painting/BD Companies, LLC), referred to hereafter as Berg, Hazard Communication Program is intended to be a stand-alone document prepared in response to the Federal Hazard Communication Standard. The purpose of this program is to inform interested persons, including employees, that Berg is complying with the OSHA Hazard Communication Standard, Title 29 Code of Federal Regulations 1910.1200, by compiling a hazardous chemicals list, using safety data sheets (SDSs), ensuring that containers are labeled or provided with other forms of warning, and training for our employees. This program also is written to address the Minnesota Department of Labor and Industry Hazardous Substances; Employee Right-To-Know Chapter 5206 to include Hazardous Substances, Harmful Physical Agents, and Infectious Agents.

This program applies to all work operations in our company where employees may be exposed to hazardous chemicals, and physical or infectious agents under normal working conditions or during an emergency. Under this program, our employees will be informed of the contents of the Hazard Communication Standard, the hazards of chemicals with which they work, safe handling procedures, and measures taken to protect themselves from these chemicals, among other training elements.

- **PROGRAM RESPONSIBILITIES**

Management: It is the responsibility of Berg Management to support the program and to ensure that the proper information is obtained and distributed to appropriate field supervision for employee access.

Safety Director/Director of Field Operations/Superintendent: The Safety Director/Director of Field Operations/Superintendent is the Program Coordinator and has overall responsibility for the Hazard Communication Program. Our insurance Loss Control Representative will aid the program coordinator in meeting their job duties. The Program Coordinator will review and update the program as necessary. The Program Coordinator's responsibilities include:

1. Develop and Provide an Up to Date Inventory List with Safety Data Sheets (SDS) to field supervision so information can be accessed by employees when requested.
2. Ensure that all employees have been trained in the proper use of hazardous substances used in everyday (routine) and infrequent (non-routine) tasks.
3. Ensuring that all employees have been trained on how to read SDS and labels.
4. Assist field supervisors in identifying all jobs that require the use of hazardous substances

Field Supervisors: Field Supervisor responsibilities include the following:

1. Verifying that all employees working under their supervision have received the proper training prior to working with hazardous substance on the job.
2. Ensuring that all employees use personal protective equipment when required.
3. Making routine surveys of the work area to ensure that safe practices are being followed.
4. Reviewing the SDS with employees before any non-routine task begins.
5. Ensuring that required labeling practices are being followed.
6. Make sure SDS is available for employees at the project site.
7. Assist Safety Director/General Superintendent in keeping project inventory list current with up-to-date SDS's.

Employees: Employee responsibilities include the following:

8. Obeying established rules and following the direction of the supervisor
 9. Find out from your foreman which of the materials you work with are hazardous and how they can harm you.
 10. Know how to read labels and SDS's and become familiar with those applicable to what you work with; know what you should and should not do when working with these hazardous materials.
 11. Always follow the rules and procedures your foreman gives you when working with hazardous materials including wearing the proper protective equipment.
 12. Keep container labels in good, readable shape, and label all secondary containers.
 13. Pay attention to the way newly hired employees and subcontractor employees handle hazardous materials around you; let the foreman know if you think other employees are doing something wrong in their handling of hazardous material.
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14. Informing your supervisor of:
 1. Any symptoms of overexposure that may possibly be related to hazardous substances
 2. Missing labels on containers
 3. Any questions you may have before starting a task with hazardous materials

PROGRAM ELEMENTS

Chemical Inventory and Hazard Determination Procedures:

1. An inventory of all hazardous material used in the work place will be compiled by the Safety Director. The Safety Director will be responsible for determining which materials are hazardous.
2. The Foreman will maintain a current list of all hazardous material used on the job-site. The list will be located at the job-site and will be made available to employees for reference on verbal or written request.
3. A master list of all hazardous material will be maintained at the job-site and at the company main office.
4. The Project Manager and/or Foreman are responsible for reporting to the Safety Director any hazardous materials coming into their area/project that does not appear on the inventory. The Safety Director will then determine if the chemical is hazardous and will ensure that Safety Data Sheets and proper labeling are obtained. The Foreman is responsible for providing interim labeling.
5. The Safety Director is responsible for reviewing and updating SDS's for all purchased hazardous materials.

Labels and Warnings:

6. The supplier must furnish labels on all hazardous substances and harmful physical agent containers that are compliant with GHS labeling requirements. The labels should include the chemical name, appropriate hazard statements and pre-cautionary statements, signal words and the name and address of the manufacturer or vendor.
7. The Foreman is responsible for ensuring that the hazard identification labels are on incoming containers and are not removed or defaced. The Foreman will report any unauthorized removal or defacing of any labels to the Safety Director for appropriate action.

8. The Safety Director is responsible for reviewing and updating label information. Project Managers must notify the Safety Director of any new labeling information that is received from the manufacturers.
9. The Shop manager and site foreman is responsible for ensuring that labels are placed on in-house containers of hazardous materials.

Safety Data Sheets (SDS):

10. The Project Manager and/or Safety Director will be responsible for requesting SDS information for all purchased hazardous substances or harmful physical agents. This will be done by requesting all currently used hazardous materials and by including the appropriate language to all orders for new materials that require SDS's be included with initial shipments.
11. If SDS's are not received with the initial shipment, the Foreman receiving the shipment should contact the Project Manager and/or Safety Director to request the SDS from the vendor. If the SDS is not received within 15 days, the Project Manager and/or Safety Director should be notified, and a decision made regarding alternate suppliers and/or discontinuation of the chemical's use. The Safety Director is responsible for providing interim information for all materials that do not have an SDS.
12. All SDS's must contain the following information: Chemical Identity, Responsible Party, Hazardous Ingredients, Physical and Chemical Characteristics, Fire and Explosion Hazard Data, Reactivity Data, Health Hazards, Precautions for Safe Handling, and Control Measures.
13. A master list of SDS's for hazardous materials used throughout the organization will be maintained in the office. This office will be responsible for keeping the master SDS list updated by coordinating with the Safety Director, Project Manager, and the Foreman. The master list of SDS's will be made accessible to employees

Harmful Physical Agents

- **Noise**

Most people know that excessive noise can cause hearing loss, but how can you know if you're at risk? Do you have to shout to talk to someone who is only a few feet away from you? Do you have a ringing in your ears, or do things sound dull, after you leave a noisy area? If this is the case, whether on or off the job, your exposure to the noise may be hazardous.

To understand how hearing loss happens, let us take a look at how we hear. A sound sends out vibrations into the air. Once these sound waves enter the ear, they cause movement in tiny hair-like structures deep within the inner ear. This movement creates nerve impulses that are picked up by the auditory nerve and are perceived as sound. The force from loud noise can permanently damage the tiny hair-like structures to cause hearing loss.

The damage can be caused instantly from an intense, brief impulse noise; or it can occur gradually from continued exposure to noise. Since noise-induced hearing loss usually happens gradually over time, you should know how to recognize some of the signs of a potential hearing problem:

- Do you have trouble hearing phone conversations?
- Do you have a problem following a conversation if several people are talking at once?
- Do you have to ask people to repeat themselves?

- Do you have trouble hearing conversations when the background is noisy?
- Do you think other people mumble?
- Do other people seem annoyed because you misunderstand what they say?

While these questions aren't intended to diagnose a hearing problem, if you answered "yes" to three or more, you may want to have your hearing checked by a doctor.

You want to do what you can to keep any hearing loss from getting worse. One way to do just that is to participate in your employer's hearing conservation program

Noise levels are measured in decibels (dBA). We talk at about 70 decibels. What is deceiving is that when the decibels go up a little, the actual energy that is produced by the noise goes up a lot. For example, an increase of only 3 decibels doubles the sound energy that hits your eardrum. An increase of 10 decibels results in sound energy levels 10 times greater. Add 10 more decibels and you increase the sound wave energy by 100 times.

Because of the catastrophic effect a hearing loss can have on an individual's life, OSHA has established rules stipulating how long you may be exposed to certain noise levels before you must wear hearing protection.

Decibel (Loudness) Comparison Chart

Here are some interesting numbers, collected from a variety of sources, that help one to understand the volume levels of various sources and how they can affect our hearing.

Environmental Noise	
Weakest sound heard	0dB
Whisper Quiet Library at 6'	30dB
Normal conversation at 3'	60-65dB
Telephone dial tone	80dB
City Traffic (inside car)	85dB
Train whistle at 500', Truck Traffic	90dB
Jackhammer at 50'	95dB
Subway train at 200'	95dB
<i>Level at which sustained exposure may result in hearing loss</i>	<i>90 - 95dB</i>
Hand Drill	98dB
Power mower at 3'	107dB
Snowmobile, Motorcycle	100dB
Power saw at 3'	110dB
Sandblasting, Loud Rock Concert	115dB
<i>Pain begins</i>	<i>125dB</i>
Pneumatic riveter at 4'	125dB
<i>Even short-term exposure can cause permanent damage - Loudest recommended exposure <u>WITH</u> hearing protection</i>	<i>140dB</i>
Jet engine at 100'	140dB
12 Gauge Shotgun Blast	165dB
Death of hearing tissue	180dB
Loudest sound possible	194dB

OSHA Daily Permissible Noise Level Exposure

Hours per day	Sound level
8	90dB
6	92dB
4	95dB
3	97dB
2	100dB
1.5	102dB
1	105dB
.5	110dB
.25 or less	115dB

Heat Related Stress

Working in hot weather can result in injuries and illnesses that are just as dangerous but not as obvious as other hazards on your jobsites. Heat Exhaustion and Heatstroke are the two conditions that are of main concern.

Heat Exhaustion - Heat exhaustion is caused by excessive dehydration and elevated body temperature. It is not a deadly condition but if untreated it may lead to heatstroke, which could result in death or permanent brain damage. Symptoms for heat exhaustion are different from heat stroke. The victim's skin is normally cold, clammy, and covered with perspiration. The face is pale. Other symptoms may include: headache, loss of appetite, drowsiness, cramps, faintness or unconsciousness. Pupils are sometimes become dilated. To treat heat exhaustion, move victim to a shaded area, keep victim lying down with legs slightly elevated, and give the victim small amounts of water. This will help cool the individual but will not replenish or rebalance the body's nutrients. Sport drinks like Gatorade will help balance your electrolytes. Typically, heat exhaustion occurs when the body's temperature gets close to 102 degrees.

Heatstroke - Heatstroke is much more serious than heat exhaustion. Heatstroke can result in death or irreversible brain damage within a short time period. While heat exhaustion is often connected to physical exertion and the loss of electrolytes, heatstroke results from a rise in the body's core temperature to around 105 degrees. At this temperature internal organs, including the brain, begin to suffer permanent damage. It is a common belief that the lack of sweating is an indicator of heatstroke but that is not always the case. Here are some other, perhaps more reliable, symptoms of heatstroke; red, flushed skin, headaches, rapid pulse, confusion, unconsciousness, and seizures. Studies have shown that there is one common symptom that all heatstroke victims share. That is confusion. The brain is extremely sensitive to temperature fluctuations and a small rise in brain temperature can produce a sudden state of confusion for the victim of heatstroke. Therefore, heatstroke is so dangerous. The person who is suffering from heatstroke is usually not mentally capable of determining that he has a problem. That is why it is important to work as a team during hot summer weather. If you suspect someone is suffering from heatstroke he/she should be rushed to the nearest medical facility, any delay could be fatal.

What to do for Heat Exhaustion:

14. Replenish the body's fluids and nutrients.
15. Rest in a cool area to lower your body temperature.

What to do for Heatstroke:

1. Call for help immediately. If there's a clinic/hospital close to your jobsite consider taking the victim to the doctor yourself, if it will save time.
2. If you're waiting for an ambulance to arrive remove hot outer clothing and spray victim's body with water. Also "fan" the victim to reduce body temperature until help arrives.

- **AZ and CA please refer to their specific Heat illness prevention plan**

Infectious Agents

Blood borne Pathogens

Every construction project has unique challenges and potential exposures to blood-borne pathogens. The project supervisor in conjunction with management shall be knowledgeable in the implementation and procedures associated with eliminating or minimizing employee exposure to blood or other body fluids. The project supervisor shall coordinate compliance methods, work practice controls, handling of contaminated equipment, Hepatitis B vaccinations and post-exposure evaluation/follow-up.

Compliance Methods

All blood or other potentially infectious material will be considered infectious regardless of perceived status of source individual. Standard personal protective equipment precautions will be observed during first aid operations to prevent contact with blood or other potentially infectious materials.

Potentially Infectious Materials Disposal

1. Waste will be labeled with a biohazard symbol for disposing of contaminated materials.
2. Contaminated materials will be disposed of through approved biohazard waste disposal facilities.
3. Person(s) doing post aid cleanup will be trained in proper personal protective equipment usage, handling, disinfecting and disposal procedures.

Engineering and Work Practice Controls

1. Appropriate Personal Protective Equipment to avoid exposure shall be worn when administering first-aid. (e.g., gloves, rescue breathers, eye protection, etc.)
2. Upon removal of potentially contaminated gloves or other protective equipment/clothing, employees shall wash hands and other potentially exposed areas immediately.
3. Following any contact of body areas with blood or other infectious materials, employees must wash their hands and any other exposed skin with soap and water as soon as feasible. Exposed mucous membranes (eyes) should be flushed with water.
4. Site equipment, which becomes contaminated, must be decontaminated before using, servicing or moving.
5. Any information regarding the contamination area/equipment shall be conveyed to all employees who may access area/equipment.

Personal Protective Equipment

PPE Provision - Personal protective equipment for first aid responders will be provided without cost. Personal protective equipment will be chosen based on anticipated exposure to blood or other potentially infectious materials.

PPE Use

Each first responder shall use appropriate PPE unless, in the first aid responder's judgment, its use would have prevented delivery of health care or posed an increased hazard to safety. When the employee makes this judgment, circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

PPE Accessibility

Supervision shall ensure appropriate PPE is readily available in first aid kits. Hypoallergenic gloves, glove liners, powder less gloves, or similar alternatives must be provided.

PPE Cleaning, Laundering, and Disposal

All PPE will be cleaned, laundered and disposed of by the employer and at no cost to the employee. All repairs and replacements will be made by the employer at no cost to the employee.

All garments, which are penetrated by blood, shall be removed immediately or as soon as feasible. All PPE will be removed prior to leaving the area where first aid was provided.

When PPE or penetrated clothing is removed, it shall be placed in an appropriate container for storage, washing, decontamination or disposal. When possible, contaminated materials used for first aid will be given to responding EMT's for proper disposal.

Gloves

Latex style gloves will be worn during first aid procedures. Gloves are not to be washed or decontaminated for re-use and are to be replaced as soon as practical when they become contaminated or as soon as feasible if they are torn, punctured or otherwise compromised.

Eye and Face Protection

Mask in combination with eye protection, such as goggles or glasses with solid side shield, or chin length face shield are to be worn whenever splashes, spray, splatter or droplets of blood or other potentially infectious materials may be generated and eye, nose and mouth contamination can be reasonably anticipated.

Employee Training:

All existing and new employees that may be exposed to hazardous material while performing their job will be trained before they are assigned to the job. The Safety Director will provide this training.

Training updates will be repeated at intervals of not greater than one year.

Before a new hazardous material is introduced into the work place, all affected employees will receive training for the hazards associated with the material. The Safety Director and the Foreman will provide this training.

1. The employee-training program will consist of the following elements:
 - a. Information on the general requirements of the Employee Right-To-Know Program.
 - b. Descriptions of the safety practices and operating procedures to be used in their work areas or departments where hazardous materials are present.
 - c. An explanation of how to read and interpret information provided in the SDS's regarding the physical, chemical, and hazardous properties of a substance or mixture.
 - d. An explanation of how to read and interpret labeling information on hazardous substances and harmful physical agents.
 - e. Protective measures to be used when handling hazardous materials, including work practices and personal protective equipment.

- f. Procedures employees can use to obtain and use the hazardous information available, including SDS's.
- g. Identification of persons responsible for training employees exposed to hazardous materials while performing non-routine tasks or employees that work in operations where spills of hazardous chemicals may occur.
- h. An explanation of useful detection methods for determining the presence or release of hazardous substances in the work place, including observations, and any monitoring systems that may be used for this purpose.
- i. An explanation of safety practices, including any new rules required by the Right-To-Know Standard, and an explanation of the disciplinary actions that will be taken for employee violations of these rules.
- j. Records of training will be retained for five years and made available to employees, upon request, by the Safety Director.

Globally Harmonized System, (GHS)

In 2003, the United Nations (UN) adopted the Globally Harmonized System of Classification and Labeling of Chemicals, or (GHS) for short. This international approach standardized how chemicals were “classified” as well as standardized how and what the information is presented on container labels and Safety Data Sheets. This change enhances both employer and employee comprehension of hazards, which will help to ensure appropriate handling and safe use of work place chemicals. In addition, the Safety Data Sheet requirement established an order of information that is also standardized which allows persons to access the information more efficiently and effectively. In 2012, the United States, (OSHA) adopted the Globally Harmonized System, (GHS), as an international approach to hazard communication. As a result, manufacturers and distributors of hazardous chemicals and products must begin to standardize how they categorize the hazards of their products, as well as the information and format of their container labels and Safety Data Sheets to be in compliance with (GHS). Employers must also train their employees on all the requirements of the new labeling systems and Safety Data Sheets, (SDS's). GHS is being phased in over the next four years and will be implemented completely on June 1, 2016. The first established phase in date is December 1, 2013, which requires employers to train all employees on the new GHS system, with a focus on pictograms, label elements, and Safety Data Sheet 16 section format. The following information addresses these elements.

Revised Hazard Communication System, (HCS)

With the adoption of (GHS), OSHA had to revise the Hazard Communication System, (HCS) to be compliant with (GHS). This is only a modification to the existing Hazard Communication Standard. The parts of the standard that do not relate to the Globally Harmonized System, (GHS), (such as the basic framework, scope, and exemptions) remain basically unchanged. Some modifications to terminology have been made in order to align the revised Hazard Communication System, with language used in GHS. The four major changes are hazard classification, pictograms, labels, and safety data sheets.

1. **Hazard Classification** – Chemical Hazard Classification are broken down into type of Hazard and Class category. Hazard type defines the nature of the hazard and category defines the severity. Pictograms are now used to visually identify Hazards and are identified in the next section.
2. **Hazard Class Categories** are rated up to 5 sub-categories. (1)- being the highest, (4)- being the lowest and (5)- Hazards Not Otherwise Classified (HNOC). Note: Hazard category (5) does not

mean that it is a low hazard, it just means that it did not fall under the established classification criteria so it may or may not pose a higher hazard than say a (3) or (4). Also note that this rating system for GHS is opposite the National Fire Protection Association, (NFPA) and the Hazardous Materials Identification System, (HMIS).

Hazard Types are defined as either Health Hazards; Physical Hazards; Environmental Hazards; and Hazards Not Otherwise Classified (HNOC).

3. **Health Hazards** refer to chemicals which can cause illness right away (acute) or later (chronic). A rash that results from a one- time exposure would be an **acute** health hazard. Cancer that develops much later or is caused by repeated exposures to a chemical would be a **chronic** health hazard. The following pictograms all indicate Health Hazards and depending on the Hazard Classification would determine which pictogram(s) are displayed on the label and SDS.



Health Hazards are broken down into 10 types:

Acute Toxicity	Skin
Corrosion/Irritation	Serious Eye
Damage/Eye Irritation	Germ Cell
Mutagenicity Carcinogenicity	Reproductive
Toxicology	
Target Organ Systemic Toxicity – Toxicity- Single Exposure	Target Organ Systemic Repeated Exposure
Respiratory or Skin Sensitization	Aspiration Toxicity

4. **Physical Hazards** refer to a chemical's physical properties, and means a material can easily burn, explode, or react violently when it meets another substance. The following pictograms indicate Physical Hazards and depending on the Hazard Classification would determine which pictogram(s) are displayed on the Label and SDS.



5. **Environmental Hazards** refer to a chemicals ability to cause harm in the environment. This could be hazards to aquatic life, vegetation, ozone layer, etc. The pictogram for Environmental



Hazards is:










Note: OSHA did not adopt the environmental pictogram because they do not have any jurisdiction over environmental issues, EPA has this jurisdiction.

6. **Hazards Not Otherwise Classified (HNOC)** refer to chemicals for which there is evidence of adverse physical or health effects, but which do not meet the specified criteria for the physical or health hazard classifications. Classification of HNOC does not mean the chemical poses no hazards, only that it does not fit into one of the established GHS hazard classes.

7. **Pictograms** – are symbols used on a white back-ground with a red border that is intended to

convey specific information about the hazards of a chemical. The pictograms which appear on the label and Safety Data Sheet are determined by the chemical's hazard classification. There are nine different pictograms used in GHS. **You may find that in some publications they refer to only (8) pictograms. The reason for this is because OSHA did not adopt the environmental pictogram because OSHA does not enforce environmental issues, EPA has this enforcement.** Below are the nine pictograms:

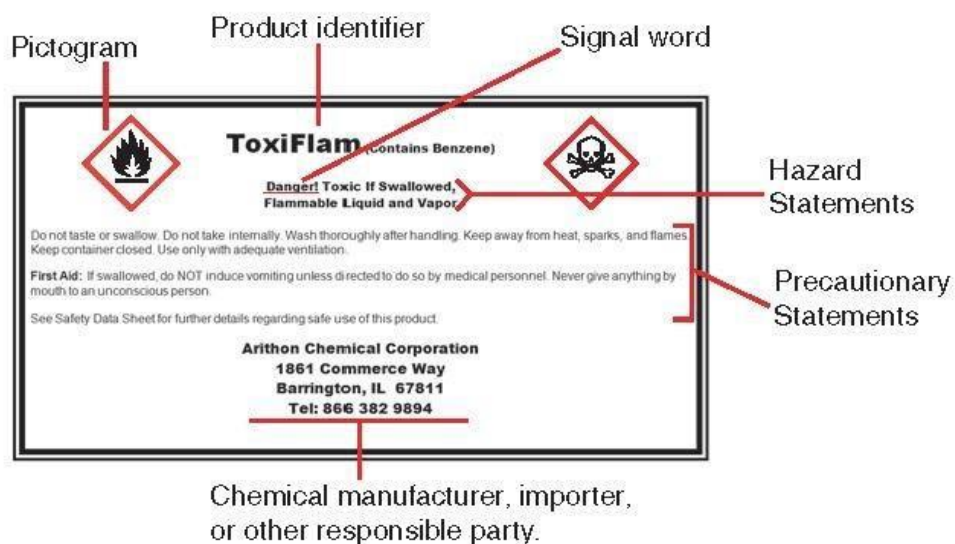
HCS Pictograms and Hazards

<p>Health Hazard</p>  <p>Carcinogen Mutagenicity Reproductive Toxicity Respiratory Sensitizer Target Organ Toxicity Aspiration Toxicity</p>	<p>Flame</p>  <p>Flammables Pyrophorics Self-Heating Emits Flammable Gas Self-Reactives Organic Peroxides</p>	<p>Exclamation Mark</p>  <p>Irritant (skin and eye) Skin Sensitizer Acute Toxicity Narcotic Effects Respiratory Tract Irritant Hazardous to Ozone Layer (Non-Mandatory)</p>
<p>Gas Cylinder</p>  <p>Gases Under Pressure</p>	<p>Corrosion</p>  <p>Skin Corrosion/Burns Eye Damage Corrosive to Metals</p>	<p>Exploding Bomb</p>  <p>Explosives Self-Reactives Organic Peroxides</p>
<p>Flame Over Circle</p>  <p>Oxidizers</p>	<p>Environment</p> <p>(Non-Mandatory)</p>  <p>Aquatic Toxicity</p>	<p>Skull and Crossbones</p>  <p>Acute Toxicity (fatal or toxic)</p>

Labels -on the product must now display certain information regarding the product. To be compliant with GHS, manufacturers and distributors of hazardous chemicals and products must begin standardizing their container labels to display all the following information. As of December 1, 2015, all products will need to display all the new label information.

- **Product Identifier**- which may be the product name or an identifying number that can be cross- referenced to the corresponding Safety Data Sheet, as well as to the list of hazardous chemicals that is maintained in the Safety Data Sheet log book.
- **Signal Words** – are words that indicate the relative level of severity. There are only two signal words used: **Danger** and **Warning**. When evaluating the severity of the hazard, the word “Danger” translates into a category 1 or 2, and a “Warning” would translate to a 3 or 4 as indicated earlier in this material.
- **Hazard Statements** – these are short statements assigned to a specific hazard class and category that describes the nature of the hazard. In simple terms, hazard statements tell you what the product can do to you if not used properly. Examples could be: Highly Flammable; Corrosive to skin or eyes, may cause liver damage, etc.
- **Precautionary Statements** – are phrases that list the recommended measures that should be taken to minimize or prevent exposure to the chemical. In simple terms, what you need to do or use to protect yourself from the hazards. Examples could be: Keep away from heat or sparks, wear gloves or goggles, use in ventilated area, etc.
- **Pictograms** – are icons or pictures that appear on the label that identify the hazards based on the products hazard classification.
- **Name, Address, and Telephone Number** – this is contact information of the chemical manufacturer, importer, or other responsible party so additional information can be gathered in any emergency.

Below is a sample of a product label with the required information.



8. **Safety Data Sheets** – are sheets used to communicate the hazards of hazardous chemicals and products from the manufacturer to the user. These were formerly called Material Safety Data

Sheets (MSDS's) and will be referred to as Safety Data Sheets (SDS's) under the GHS system. As of June 1, 2015, all manufacturers and distributors must provide the new formatted SDS's. Under the old MSDS program, there was no consistency in the format and/or how the hazards were classified. All this will change under the GHS format so in the future all sections of the Safety Data Sheet will be in a uniform format, and include section numbers, headings, and associated information under each heading. Below is a list in order of each Section Number, Heading and associated information.

- **Section 1, Identification** – Includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.
- **Section 2, Hazard(s) Identification** – Includes all hazards regarding the chemical; required label elements. This is where one will find the pictograms, category class, signal words, “Danger” or “Warning”, Hazard Statements and Precautionary Statements.
- **Section 3, Composition/information on ingredients** – includes information on chemical ingredients; trade secret claims.
- **Section 4, First-aid measures** – Includes important symptoms/effects, acute, delayed; required treatment.
- **Section 5, Fire-Fighting measures** – Lists suitable extinguishing techniques, equipment; chemical hazards from fire.
- **Section 6, Accidental release measures** – List emergency procedures; protective equipment; proper methods of containment and clean-up.
- **Section 7, Handling and Storage** – List precautions for safe handling and storage, including incompatibilities.
- **Section 8, Exposure controls/personal protection** – Lists OSHA's Permissible Exposure Limits (PEL's); Threshold Limit Values (TLV's); appropriate engineering controls; personal protective equipment (PPE).
- **Section 9, Physical and Chemical properties** – Lists the chemical's characteristics such as color, form, boiling point, flash point, vapor pressure, etc.
- **Section 10, Stability and Reactivity** – Lists chemicals stability and possibility of hazardous reactions.
- **Section 11, Toxicological information** – Includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.
- ***Section 12, Ecological information** - Includes environmental information hazards
- ***Section 13, Disposal Considerations** - How to dispose of properly.
- ***Section 14, Transportation Information** - List transportation DOT requirements.
- ***Section 15, Regulatory Information** - List regulations on use.
- **Section 16, Other Information** – Includes the date of preparation or last revision.

***Note:** Since other Agencies regulate this information, OSHA will not be enforcing Sections 12 through Section 15.

EXPLANATION OF TERMS USED ON SAFETY DATA SHEETS:

Hazardous Chemical- is any chemical which is classified as a physical or health hazard, or which is a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified, (HNOC). In other words, any chemical that can hurt you.

Asphyxiant- A vapor or gas that can cause unconsciousness or death by suffocation.

Pyrophoric – A chemical that will ignite spontaneously in air at temperature of 130 degrees F (54.4 degrees C) or below.

Combustible Dust – Dust that will ignite at specific concentrations given an ignition source.

Acute Exposure – An exposure to a toxic substance which occurs in a short or single time.

Chronic Exposure – An adverse effect on a human or animal body with symptoms that develop slowly over a long period of time.

Carcinogen – A chemical substance or mixture which induce cancer or increase its incidence.

CAS Number – The Chemical Abstracts Service number, if applicable.

DOT Classification - The appropriate classification as determined by the regulations of the Office of Hazard Material, Department of Transportation.

Boiling Point (°F) - The temperature in degrees Fahrenheit at which the substance will boil.

Vapor Pressure - The pressure exerted by a vapor, measured in pounds per square inch absolute –psia.

Vapor Density – The density of the gas given off by a substance. It is usually compared with air, which has a vapor density of 1. If the vapor is denser than air (greater than 1), it will sink to the ground; if it is less dense than air (less than 1), it will rise.

Solubility in Water - The solubility of a material by weight in water at room temperature. The terms: negligible, less than 0.1 percent, 0.1 to 1 percent; moderate 1 to 10 percent, applicable 10 percent or greater.

Appearance and Odor - The general characterization of the material, i.e., powder, colorless liquid, aromatic odor, etc.

Specific Gravity (H₂O=1) - The ratio of the weight of a volume of the material to its weight of an equal volume of water.

Percent, Volatile by Volume (%) - The percent by volume of the material that is considered volatile. (The tendency or ability of a liquid to vaporize.)

Evaporation Rate - The ratios of the time required to evaporate a measured volume of a liquid to the time required to evaporate the same volume of a reference liquid (ethyl ether) under ideal test conditions. The higher the

PEL- Permissible Exposure Limit. PELs are regulatory limits on the amount of concentration of a substance in the air, to which workers may be exposed without adverse effects. OSHA PELs are based on an 8-hour time weighted average (TWA) [exposure](#).

TLV - Threshold Limit Value (TLV) indicates the permissible exposure concentration, a limit established by a government regulatory agency, or an estimate if none has been established.

IDLH – Immediately dangerous to Life and Health. As defined by NIOSH, this represents a hazardous atmosphere from which one could escape within 30 minutes without any escape-impairing symptoms or any irreversible health effects.

Chemical Asphyxiant – Substances that prevent the body from receiving or using adequate oxygen supply. Carbon Monoxide and cyanide are examples.

Corrosive- A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact.

Dermal- By or through the skin.

Dermatitis- Inflammation of the skin from any cause.

Dose – The amount of a substance received at one time. Dose is usually expressed as administered or absorbed dose (e.g., milligrams material/kilogram of body weight).

ratio, the slower the evaporation rate.)

Flash Point (Method Used) - The temperature in degrees Fahrenheit at which a liquid will give off enough flammable vapor to ignite in the presence of a source of ignition.

Conditions to Avoid - Conditions that, if they exist with the substance present, could cause it to become unstable.

Incompatibility (Materials to Avoid) - Materials that will react with the substance.

Upper Flammable Limit (UFL) – The maximum concentration of a gas or vapor in air above which it is not possible to ignite the vapors.

Effects of Overexposure - The effects on or to an individual who has been exposed beyond the specified limits.

Emergency and First-Aid Procedures - Gives first aid and emergency procedures in case of eye and/or skin contact, ingestion and inhalation.

Stability – Whether the substance is stable or unstable. An unstable substance is one that will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shock, pressure, or temperature.

Spill or Leak Procedures - Steps to be taken if material is released or spilled. Method and materials to use to clean up or contain.

Waste Disposal Method - Method and type of disposal site to use.

Exposure Limit – A chemical's safe concentration in workplace air. At this level or lower most workers can be exposed without harmful effects.

Flammable Gas – A gas having a flammable range with air at 20 degrees C and a standard pressure of 101.3 kPa.

Flammable Liquid – A liquid having a flash point of not more than 93 degrees C.

Flash Point (FP) – The lowest temperature at which the vapor of a substance will catch fire, even momentarily, if heat is applied. Provides an indication of how flammable a substance is.

Health Hazard Data - Possible health hazards as derived from human observation, animal studies or from the results of studies with similar products.

Lower Explosive Limit (LEL) – Refers to the lowest concentration of gas or vapor by percent volume in air that explodes if an ignition source is present at ambient temperatures.

Upper Explosive Limit (UEL) The maximum concentration of a flammable vapor above which ignition will not occur even on contact with a source of ignition.

Lower Flammable Limit (LFL) - Refers to the lowest concentration of gas or vapor by percent volume in air that burns if an ignition source is present at ambient temperatures.

Respiratory Protection - Specific type should be specified, i.e., dust mask, NIOSH-approved cartridge respirator with organic-vapor cartridge.

Ventilation – Type of ventilation recommended, i.e., local exhaust, mechanical, etc.

Protective Gloves - Refers to the glove that should be work when handling the product, i.e., cotton, rubber.

Flammable Limits - The range of gas or vapor concentration (percent by volume in air) that will burn or explode if an ignition source is present. (LEL) means the lower explosive limits and (UEL) the upper explosive limits given in percent.

Extinguishing Media - Specifies the fire-fighting agent(s) that should be used to extinguish fires.

Special Fire-Fighting

Procedures/Unusual Fire and Explosion Hazards - Refer to special procedures required if unusual fire or explosion hazards are involved.

NOTE: These are just some of the definitions of terms you may find on an SDS. If you have questions or don't understand, please ask your supervisor for clarification.

SECTION 7: Fall Protection

The Fall Protection Standard identifies activities requiring fall protection systems, provides an explanation of various types of authorized fall protection systems, and outlines the training that is required before using those systems. The new standard uses a benchmark height of six (6) feet above the ground to trigger fall protection requirements. The program applies to all construction activities unless another construction standard specifically requires fall protection. Most work on unprotected sides and edges, leading edges, hoisting areas, holes, formwork and reinforcing steel, ramps and walkways, excavations, roofs, pre-cast concrete erection residential construction, wall openings, and other such work areas will require some type of fall protection system. Exceptions to this rule include; steel erection, scaffolding, stairways and ladders, cranes and derricks, tunneling operations, electric transmission assessment of workplace conditions. For each specified area of operation, the standard will give us a choice of one or more methods of fall protection systems to use. These types of fall protection include; guardrail system, safety net system, personal fall arrest system, positioning device system, covers, and a fall protection plan which can only be used in certain situations when we demonstrate that it is infeasible, or it creates a greater hazard to use conventional fall protection systems. Most systems that our employees will be working with include; guardrail system, person fall arrest system, and covers.

Guardrail System

- Top Rail must be at a height of 42 inches (plus or minus 3 inches).
- Mid Rail must be at a height of 21 inches.
- Intermediate members or openings must not be greater than 19 inches.
- Top Rail must be able to withstand 200 lbs. of outward or downward force.
- Mid Rail must withstand a force of 15 lbs.
- No steel or plastic banding shall be used for a Top Rail.
- Wire rope Top Rail must be flagged every 6 feet.
- All wire rope used for perimeter protection must be at least ¼ inch nominal diameter.
- Manila, plastic, or synthetic rope rails must be inspected frequently.

Personal Fall Arrest System

- All body harnesses will be used always and inspected prior to use.
- Limit maximum arresting force on a worker to 1,800 lbs. when used with a body harness.
- Rig so a worker can neither free fall more than six (6) feet, nor contact any lower level. Deceleration devices used shall not exceed 3 ½ feet.
- Dee Rings and Snap Hooks must have a minimum tensile strength of 5,000 lbs.
- Snap Hooks must be sized to be compatible with the member to which they are connected to for the prevention of rollout. Only locking type snap hooks shall be used.
- Horizontal lifelines shall be designed, installed, and used under the supervision of a qualified person as part of a complete personal fall arrest system maintaining a safety factor of at least two.
- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 lbs.
- Lifelines shall be protected against being cut or braided.
- Anchorage used for attachment of personal fall arrest equipment shall be independent of anchorage being used to support or suspend platforms and capable of supporting at least 5,000 lbs. per worker.
- Follow all Fall Protection rules and Policy provided by the specific GC on the jobsite.

SECTION 8: Silica Awareness

Field Employees

- Only use tools for which proper training has been provided or obtained. Inspect and test the functions of the tools before each use to ensure it is in safe working condition.
- Do not work in areas of potential silica dust exposure without proper training on silica and sufficient controls as detailed in this section. If you are unsure if the work around you is exposing you to air borne silica, please contact your Foreman.

TRAINING

Team Members who may encounter respirable silica (including craft workers and subcontractors) must be properly trained on the hazards associated with silica exposure. Training should include, but not necessarily limited to, the following:

- What is silica? A description on what silica is and how it can be harmful
- Associated health hazards
- Action Levels & Permissible Exposure Limits as established by applicable laws
- Where silica is used/found?
- How silica can be controlled
- Tools & materials that can be used to protect against silica exposure
- Standards, Instructions, Examples

On Berg Group projects, respirable silica control must be attempted first through engineering controls, next through administrative controls, and finally using PPE if engineering and administrative controls prove to be ineffective.

This section addresses the recommended engineering controls for five common tools/activities which create potential exposures to respirable silica. This is not an all-inclusive list of potential exposures to respirable silica but rather provides a guide to The Berg Group projects on creating protections to address dust producing activities related to silica containing materials. If there is a question to a potential exposure, employees should contact the Safety Director.

- Mixing Operations (fireproofing/stucco)
- Removal of fireproofing material
- Use of Rotary Hammers and Similar Tools
- Sanding taping materials
- The use of sweeping compound and/or vacuum systems for cleanup activities

MIXING OPERATIONS

Cross ventilation is an effective control for silica dust generated during the dumping of a dry mix or spec-mix during mixing operations. The addition of air flow can be accomplished by use of a two-fan process supplied at the source of the dumping and where empty bags are disposed of. Cross ventilation is used to prevent the concrete mix from becoming airborne in the tenders breathing zone.

As is true with all operations, effectiveness of engineering controls must be monitored. At times, the mixing operation may have to be enclosed in poly to ensure the protection of others. In this case, contact your operating group safety professional for guidance.

REMOVING FIREPROOFING MATERIAL

A wet method should be used when fireproofing material is required to be removed for the installation of clips, kickers or other framing members. Employees shall use water to wet fireproofing material down before it is scraped and removed. Removed material shall be cleaned up and disposed of before it dries.

ORBITAL VACUUM SYSTEM DURING SANDING & CLEAN UP

Use of a vacuum system designed to capture silica dust. Such vacuum systems should utilize a High Efficiency Particulate Air (“HEPA”) self-cleaning bagged filtering system. Verify the hoses and all connections in the vacuum system are in good working condition and free of holes or cracks. Use caution when disposing of bags. When using a vacuum dust collection system during clean-up, it is recommended that a bag liner be used inside the vacuum. When emptying the contents, the bag can be closed and secured to greatly reduce the potential exposure to silica dust. The filter media should also be placed in a bag, closed and secured when disposing the filter media after the service life is met.

TRADE AND TASK TABLES

See the next two pages for tables outlining the trade and their task being performed, what the work practices were and their control plan, if a respirator is required and who completed the testing.

TRADE/Task		Work Practices Administrative/Engineering Controls	Respiratory Protection Equipment	Comments
Carpenter	Layout	Using a broom along with sweeping compound to clean floor prior to layout activities.	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC
Carpenter	Framing	Using hammer drill for securing top track. Using a hammer drill to anchor door	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC
Carpenter	Rocking	Using Roto-Zip tool to cut drywall to fit around piping electrical	No respiratory protection is needed for silica	Air monitoring performed TCDSC

Carpenter	DUROCK Installation	Using electric shears to cut sheets to length a hole saw & stick saw used to cut pipe and electric box openings. A fan was used for cross ventilation A fan to be used to provide cross-ventilation. A HEPA self-cleaning bagged vacuum is to be used for cleanup.	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC
Taper	Sanding	Orbital Vacuum sanding head will be connected to self-cleaning HEPA Vac with debris collected in a sealed bag. While Pole/detail sanding maintain upright posture and avoid standing &	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC
Laborer	Clean up	Using a broom w/ sweeping compound to clean floor to turn over to next trade partner.	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC
Trade Partners	Working in the vicinity of other	Air monitoring was completed where The Berg Group crews were working to simulate other trade partners.	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC

TRADE/Task		Engineering Control	Respiratory Protection	Comments
Plasterer	Installation of Stucco Products	Products are applied in wet form	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC

Sprayer	Spray applied Monokote Fireproofing Products	Products are applied in wet form	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC
Sprayer	Spray applied CAFCO Fireproofing Products	Products are applied in wet form	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC
Plaster Tender	Pumping Station of Stucco & Fireproofing Products Clean up	<p>At the Pump Station, Tenders will set up 2 fans for cross ventilation to divert the air away from employees breathing zone. #1 fan blows from east to west to remove flume of dust coming from the hopper opening of the mixer.</p> <p>#2 fan blows dust debris from south to north in the area where cement happens</p> <p>In the situation where trade partners are near our dust exhaust. Pump Station will be set up in a poly enclosure and air scrubbers will be used to prevent any silica exposure.</p> <p>When cleaning up overspray, crews may need to "WET DOWN" the area to keep silica from becoming air borne.</p>	No respiratory protection is needed for silica exposure	Air monitoring performed TCDSC

SECTION 9: Illness and Accident reporting

The following procedures are designed to ensure that the injured employee receives prompt medical care and to promote a rapid recovery and early return to work.

1. IMMEDIATE CARE OF INJURED EMPLOYEE

- a. All accidents and injuries must be reported **immediately** to the jobsite Foreman. Upon notice of an accident or injury, the Foreman or other responsible person, should determine the severity of the injury and contact the Safety Director immediately.
- b. If the injury is **life threatening**, call 911 immediately.
- c. If the injury is **not life threatening**, but requires medical attention, the foremen or responsible authority onsite will call WorkPartners Triage @ 1-800-359-5020. The employee should be taken to the nearest **designated medical facility** for **post-accident drug testing**. If there is not a designated medical facility, within a reasonable distance, the employee should be taken to the nearest medical facility. Within 24 hours, the employee must report to the **designated medical facility** for **post-accident drug testing**.
- d. Whenever possible, call the medical provider if medical treatment is required, to let them know that the employee is on his/her way and give them as much information as possible about the injury.
- e. At the time of injury, the employee may not need medical treatment. An Employee Accident Injury Report must be filled out describing the incident and stating the employee refuses to seek medical attention. If later, the employee decides that medical attention is necessary, the employee should advise the Foreman and Safety Director.

2. REPORTING FORMS

- a. **All** accidents must be reported. Potentially serious incidents must be investigated. Therefore, upon notice of injury, the employee and Foreman will complete a Foreman Accident Injury Report. The Foreman will send this form to the Safety director within 24 hrs. of the incident.
- b. After the Foreman Accident Injury Report has been completed, the Foreman will instruct the employee to complete the Employee Accident Injury Report. The Foreman will send this form to the Safety director within 24 hrs. of the incident.

3. Responsibilities of the injured employee:

- a. Keep all paperwork flowing to the Foremen/Field Supervisor/Safety Director
- b. Inform Foremen, Field Supervisor and Safety Director of changes in his/her restrictions (increase or decrease)
- c. Know and adhere to his/her restrictions.
- d. Attend all scheduled and advised doctor/physical therapy appointments.
- e. Report any aggravation of the injury to the assigned supervisor.