

HAZARDOUS AGENTS (CHEMICAL)

Date Revised:	August 2024	Overall Task Risk Rating:	Before Controls	After Controls	С		
Description:	Activities that require workers to use chemical hazardous agents or activities that may expose workers to these agents. Chemical hazardous agents that Gazzola employees are commonly exposed to include: Asphalt, Diesel Fuel, Dust, Concrete, etc						
Location(s):	Office, Shop, Asphalt Plant & Construction Projects						
	uments: Housekeeping WTS, Asbestos Milling WT WTS, Fuel powered tools & Equipment WTS, Fuel		u , 1	,			

RED FLAGS (HOLD WORK UNTIL CORRECTED):

- Note:
- If a product is unlabeled or the label is illegible, do not use the product
- If the worker has not been trained in WHMIS that worker must not use, transport or handle hazardous products
- If the SDS states required PPE to be worn when handling a product, do not proceed before obtaining and donning that PPE



Note: No specific PPE required.

- When onsite one must adhere to the minimum site requirements (i.e. Safety Boots, Hard Hat & High Visibility Protection). Safety Glasses and / or Respiratory Protection when necessary or required by SDS's
- Additional PPE requirements specific to the hazardous product will be stated in the SDS or on the label of the product, or addressed through task specific training

SAFE WORK PRACTICES (SWP)

General Safe Work Practices:

- Workers who are uncertain how to work safely with a hazards agent are to ask their foreman/superintendent for assistance before starting
- Start the work only when you are certain that you understand the work, the hazards and you have implemented the appropriate controls
- Unsafe conditions and situations must be reported to Foreman/Superintendents immediately (and stop work until the hazard is controlled)
- Report any unlabeled products or illegible labels to the Foreman/Superintendent (who shall ensure a proper workplace label is created)

Routes of Entry of Chemical (how hazardous agents enter the body):

- Ingestion Entry of hazardous agents through the mouth by eating, drinking or smoking with contaminated hands. Always wash hands or any affected part of the body immediately after use of a hazardous product
- Absorption When a hazardous agent touches your skin, it can enter through your skin, into your bloodstream. The bloodstream can then
 transport the chemical through the body potentially affecting different parts of your body
- Inhalation Breathing hazardous agents through your nose and mouth into your lungs is one of the most common routes of entry into the body. Gases, dusts and smoke can enter your body and cause damage to your respiratory system or they can pass through the lungs, into your bloodstream and be transported to other parts of the body
- Injection Hazardous agents can be injected into the body inadvertently or otherwise (i.e. stepping on a nail)

Designated Substances (D.S.):

- Defined in the Occupational Health and Safety Act as "a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled" These include: Acrylonitrile, Arsenic, Asbestos, Benzene, Coke Oven Emissions, Ethylene Oxide, Isocyanates, Lead, Mercury, Silica and Vinyl Chloride
- Foreman / Superintendents are trained to identify D.S. & their likely exposure routes, and implement the necessary controls



Other D.S. (i.e. Isocyanates) are not encountered at this time

HAZARDOUS AGENTS (CHEMICAL)

All employees shall wear the appropriate PPE where the potential exposure cannot be reduced below the occupational exposure limit When there is likelihood of site exposure, appropriate PPE will be provided with instructions covering use, care and maintenance No modification or removal of the specified PPE will be tolerated inside identified area Additional control methods will be implemented to ensure the containment of D.S. General Chemical Hazardous Agents Practices: Ask Foreman / Superintendents questions, consult the SDS, and fully understand the risks before handling a hazardous material The SDS is available via the online database, which can be accessed by scanning the SDS QR-code and Foremen / Superintendents have access on their phones Report all new products to the Health and Safety Coordinator so the SDS can be Gazzola Paving requested and made available Supplier Labels: Scan to access an Ensure all hazardous agents have labels and that the labels are legible MSDS Labels must not be removed, modified or altered Report any unlabeled products or illegible labels to the Foreman/Superintendent (who shall ensure a proper workplace label is created) Workplace Labels: Whmis Classes & Pictograms (WHMIS 1988 and WHMIS 2015) Workplace labels must appear on all controlled products produced within the WHMIS WHMIS WHMIS WHMIS 1988 workplace 1988 2015 2015 Hazard Class Hazard Class Symbols Symbols If hazardous products are decanted from Gases Under Pressure A an original container to a new container, a Workplace Label must be affixed to the new container B1 to B6 Flammables, Self-Heating, Emit Flammable <u>ی</u> ð Gases, Pyrophoric Gases, Liquids & Solids Workplace labels must include the **Organic Peroxides** product name (as it appears on the С Oxidizing Gases, Liquids, Solids SDS), Information for safe handling and <u>ð</u> a statement saying that the SDS is available Acute Toxicity - Oral, Dermal, Inhalation Dl Q Job Site Use, Storage & Transportation: Read and follow SDS and manufacturers **D**2 Eye Irritation, Skin Irritation T instructions Skin/Respiratory Sensitization, Carcinogenicity Comply with training & PPE Mutagenicity requirements stated in the SDS **Reproductive Hazards** Ensure proper storage conditions & D3 **Biohazardous Infectious Materials** \$ \$ locations (found in SDS) Manufacturer supplied chemicals must E Skin/Eye Corrosion £3 12 be stored in their original containers Corrosive to Metals Ensure adequate ventilation (i.e. via F Self-Reactive Substances Ř al in fans) to reduce workers' exposure ٩ **Organic Peroxides** Practice good housekeeping N/A N/A Explosive Substances (Explosives are still Store chemicals in sealed containers covered under WHMIS exclusions for now) No smoking near flammable or N/A N/A Aspiration, STOT combustible materials (post signs where æ (Single Exposure, Repeated Exposure) necessary) N/A N/A N/A **Combustible Dusts**

Designated substances that Gazzola Paving Limited may encounter are Asbestos (which was used in road paving materials) & Silica -

- Adequate fire extinguishers must be located in close proximity and readily accessible
- Immediately dispose of all empty or expired containers

Ensure proper transportation (Some instructions are in the SDS, but consult the Transportation of Dangerous Goods legislation) **Dust & Airborne contaminants:**

N/A

N/A

N/A

N/A

N/A

symbol

Use appropriate

Simple Asphyxiants

Physical Hazards Not Otherwise Classified, Health Hazards Not Otherwise Classified



HAZARDOUS AGENTS (CHEMICAL)

- Workers and sub-contractors must ensure they are aware of hazards related to airborne contaminants. Where the quality of air is or may be
 affected through work activities, supervisors must take measures to ensure that the hazards present are controlled. There are many types
 of airborne contaminants that may present on construction projects, such as fumes, carbon monoxide, nuisance dust, and crystalline silica.
- Ensure the work area is properly ventilated, where required.
- Wear appropriate respiratory protection when ventilation is not adequate or when instructed by the site supervisor.
- Obey any signage or other instruction regarding the use of respiratory equipment.
- When in a vehicle, remain in your truck and keep windows closed to stop contaminants from entering the cab.
- Shut off equipment when not in use, do not leave idling.

Carbon monoxide:

- Carbon monoxide is a clear colourless, odourless gas that can be fatal when it collects in an area and increases in concentration. Fueled (i.e. gas, diesel or propane) vehicles and machinery generate carbon monoxide during combustion.
- Make sure you have plenty of ventilation when using fuel burning equipment or engines. Keep windows and doors open where possible to
 allow fresh air into the space. Bring in mechanical ventilation if necessary.
- Carbon monoxide is toxic above 35 ppm and blocks the blood from carrying oxygen in the body. Multiple sources of exhaust used at one time can also increase the carbon monoxide levels.
- Use carbon monoxide monitors in areas where carbon monoxide may accumulate. Evacuate immediately if the alarm goes off.
- Do not leave engines running while the equipment is not in use.
- Do not use fueled equipment indoors. Select electric equipment when and whenever possible or leave the equipment outside while running the extensions inside. Do not set up fueled equipment near doors, vents, windows or anywhere else the exhaust could be brought into the building.
- Do not set up fueled equipment near the opening to a confined space. Carbon monoxide can enter the confined space and build up to a
 fatal level.
- Carbon monoxide is extremely flammable. Keep carbon monoxide away from ignition sources.
- Check fuel burning equipment for warning labels about carbon.

Spills:

- Inform the foreman / superintendent and call any respective abatement / disposal / clean-up professionals as needed
- Determine the source of the leak or spill
- Follow the spill clean-up procedures outlined in the SDS
- Contain the spill using the spill-kit materials and use a shovel to lift and dispose of materials/chemicals into spill kit containers
- If the spill is large, prevent the spill from spreading by using spill-kit materials to dam the spill
- Waste material must be placed in the appropriate containers and removed from site

References:

Refer to the associated WTS for the following potential chemical exposures:

- Asphalt Asphalt Milling WTS / Asphalt Paving WTS
- Asbestos Asbestos Milling WTS
- Diesel & other fuels Fuel powered tools & equipment WTS / Fueling & refueling WTS
- Compressed Gases Compressed Gases WTS
- Concrete Concrete Work (forming & pouring) WTS
- Silica Silica WTS
- Lead Lead WTS

Inspections:

 Supervisors must monitor the use/exposure to chemical agents in the workplace, to ensure workers are not overexposed to respective allowable levels

Training:

- Employee Orientations (including roles, responsibilities, applicable workplace task standards, WHMIS, etc.)
- Workers exposed to, or required to work with WHMIS controlled products / material, must be trained in WHMIS accordingly
- · Workers who may be exposed to hazardous agents will receive training regarding the potential hazards and controls

Personal Protective Equipment:



- All workers using Chemical Agents, must wear the required personal protective equipment set out in its SDS
- Workers on construction projects must wear, at a minimum, Safety Boots, Hard Hat & High Visibility Protection). Safety Glasses when necessary or required or as required by SDS's
- Eye protection is required when completing tasks that may cause debris / objects to dislodge or become airborne
- All employees shall wear the appropriate PPE where the potential exposure of a designated substance cannot be reduced below the occupational exposure limit
- When there is likelihood of site exposure, appropriate PPE will be provided with instructions covering use, care and maintenance
- No modification or removal of the specified PPE will be tolerated inside identified area

JOB HAZARD AND RISK ANAL	YSIS	RISK RATING High risk of injury or equipment / property damage. SYSTEM Medium risk of injury or equipment / property damage. C Low risk of injury or equipment / property damage.		
TASK HAZARDS	RATING BEFORE CONTROLS	TASK CONTROLS	RATING AFTER CONTROLS	
Carbon monoxide poisoning	A	 Ensure proper ventilation Do not leave engines running while the equipment is not in use 	С	
Designated Substance exposure	A	 Foreman/Superintendent identify presence and controls methods for designated substances All employees shall wear the appropriate PPE where the potential exposure cannot be reduced below the occupational exposure limit 	С	
 Procedures for use or storage of Flammable/combustible Material not followed 	A	 Store in cool, well ventilated, designated areas Work in well ventilated areas Avoid ignition/heat sources 	с	
 Procedures for use or storage of Corrosive Material not followed 	A	 Avoid direct contact, use appropriate PPE Work in well ventilated areas Use appropriate storage containers Ensure container lids are tightly closed 	С	
 Procedures for use or storage of Compressed gases cylinders not followed 	A	 Handle with care, do not drop Secure upright Store in designated area(s) Keep away from potential ignition sources Keep valve protector on when not in use 	С	
 Procedures for use or storage of Health hazardous Materials not followed 	A	 Avoid breathing dust or vapours Work in well ventilated areas Avoid direct contact Store in designated areas Wash/shower as required after use 	C	
Improper transportation of materials (i.e. unsecure)	В	 Ensure products are transported correctly with respect to any statements in the SDS and the TDG legislation Products are to be upright and secured for transportation 	С	
Dust & Airborne particles	В	 Dust control measures must be implemented (e.g. Wetting) Wear respiratory protection when dust levels are in excess Respiratory protection and filters are to be selected according to the material/ dust 	С	



HAZARDOUS AGENTS (CHEMICAL)

 Lack of training and education 	В	 Workers receive WHIMS training during employee orientations & specific, task-related training Workers who may be exposed to hazardous agents will receive training regarding the potential hazards and controls 	с
 Lack of proper PPE 	В	 Workers using Chemical Agents, must wear the required PPE set out in its SDS Workers shall wear appropriate PPE where the potential exposure of a designated substance cannot be reduced below the occupational exposure limit Ensure all workers are trained in the PPE that they require 	С
 Lack of Labeling/Product Identification 	с	 Supplier labels must be affixed to containers of controlled products When transferring / decanting a controlled product, a workplace label is to be placed on the new container A workplace label must appear on all controlled products produced in the workplace 	с
 Material Handling and Storage Procedures not Followed 	С	 Consult SDS and follow the requirements set out therein (i.e. handling, storage, & disposal procedures) Flammable liquids are to be handled in well-ventilated areas (outdoors when possible) Ensure products are stored in appropriate containers and locations (i.e. outdoors) as indicated in the SDS Ensure adequate signage is posted (i.e. no smoking around Flammable product storage) 	с
• Spills	С	 Inform the Foreman / Superintendent and call any respective abatement / disposal / clean-up professionals as needed Follow spill clean-up procedures outlined in the SDS 	С

SAFE JOB PROCEDURES (SJP)

Pre-Task Commencement:

- 1. Gather and wear the required PPE for the task on construction sites, all must wear head, foot and high visibility protection. Eye protection when necessary
- 2. Consult SDS for required PPE, handling and preventative measures
- 3. Eye protection is required when completing tasks that may cause debris / objects to dislodge or become airborne
- 4. Determine what chemical agents may be encountered
- 5. Ensure the site-specific workplace violence assessment is complete
- 6. Complete the Daily GAZZ Card and review with all workers the shift's tasks with any associated Chemical Agents and the associated control strategies
- 7. Ensure all workers understand the GAZZ Card contents, and sign off in acknowledgement
- 8. Ensure controls are in place prior to commencing work so risks are mitigated / eliminated
- 9. Determine what equipment / machinery / tools and material, are required for the completion of the task
- 10. Inspect all equipment / machinery / tools prior to use and document the inspections on appropriate forms when required
- 11. Ensure preventative maintenance activities have been completed where required, prior to using equipment / machinery / tools
- 12. If Chemical containers are observed to be damaged / missing labels, remove from use and notify the Foreman /Superintendent
- 13. Install fencing and hording where needed
- 14. Locate utilities Call "Ontario One Call" for locate services (when necessary)



During Task:

- 1. Consult the SDS and wear all appropriate additional PPE
- 2. Commence activities when it is safe to do so (abiding by the information presented in the SDS)
- 3. Supervisors are to monitor all hazardous agents within the workplace and if exposure levels are exceeded, implement corrective actions
- 4. Operate equipment machinery and/or tools as per manufacturer's instructions
- 5. When in operation, do not leave equipment or controls unattended

Designated Substances (D.S.):

- 1. All potential D.S. and controls will be communicated to all applicable workers before starting the task
- 2. Consult the SDS and wear all appropriate additional PPE
- 3. Control exposure of workers and the general public to any D.S. that may be present
- 4. When there is likelihood of site exposure, appropriate PPE will be provided with instructions covering use, care and maintenance
- All employees shall wear the appropriate PPE where the potential exposure of a D.S. cannot be reduced below the occupational exposure limit
- 6. Implement additional control methods to ensure the containment of D.S.
- 7. Consult the SDS and implement storage requirements in the designated location

Spill or Accidental Release:

- 1. Notify the Foreman / Superintendent, immediately
- 2. Evaluate and assess the situation
- 3. Determine what spilled / leaked
- 4. Determine the source of the leak or spill
- 5. Consult the relevant SDS to determine what controls are needed when handling and containing the product
- 6. Follow any specific disposal instructions as identified in the SDS
- 7. Contain the spill using the spill-kit materials and use a shovel to lift and dispose of materials/chemicals into spill kit containers
- 8. If the spill is large, prevent the spill from spreading by using spill-kit materials to dam the spill
- 9. Waste material must be placed in the appropriate containers and removed from site
- 10. If containment and disposal is not a safe possibility, inform the Foreman / Superintendent, assess the scene, alert workers to evacuate the area if needed and proceed to the designated muster point

Task Completion:

- 1. Consult the SDS and implement storage requirements in the designated location
- 2. Ensure all equipment / machinery / tools are maintained and stored appropriately in the designated locations
- 3. Implement any housekeeping or maintenance as required