Pembina Trails School Division *Accomplish Anything*	**SAFE WORK PROCEDURE**	**Disinfecting Classrooms using DF200 Fogger**

LOCATION :	WRITTEN BY:	APPROVED BY:	DATE:	LAST REVISION:
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PERSONAL PROTECTION EQUIPMENT (PPE)

 Safety glasses with sealed gaskets or a face shield must be worn at all times dispensing chemicals.	 Long and loose hair must be tied back
 Appropriate footwear must be worn. Shoe must be fully enclosed. No open toed shoes.	 Tychem2000 body suit must be worn.
 Rings and jewelry (long necklaces / bracelets, etc.) must not be worn.	 Full face respirator must be worn at all times when operating machine.
 Disposable gloves/reusable chemical resistant gloves must be worn at all times.	

HAZARDS PRESENT	ADDITIONAL REQUIREMENTS
• Chemical splash • Inhalation of fog • Slip and trip • Chemical spill • Ergonomic injury – improperly carrying the fogger for long periods of time.	• Fogger Training by Provision Agro. Ltd. • WHMIS Training • Respirator fit testing

SAFE WORK PROCEDURE

PRE-OPERATIONAL SAFETY CHECKS:

1. Staff must be respirator fit tested within the last 3 years.
2. Two people must be present at all times when fogging indoors.

   Hazard: when fogging indoors it can be difficult to see your surroundings, which can result in slip and falls and serious injury.
3. Inspect all PPE prior to wearing.
   - Inspect respirator – check elastic head band for wear and elasticity; check gaskets for dirt and debris; check mask for wear, cracks, tears, deformation due to storage. If damaged replace.
   - Chemical cartridges – always remove from mask once work is complete. Tape over the openings and store in a separate bag. Prior to use, remove tape and secure to mask. Prior to first use, write the current date on the cartridge. This will help to determine the life of the cartridge.

- Inspect Tychem suit – check for signs of wear and tear at all seams; check the zipper; check the cuffs and hood for tears. If damaged replace.
- Inspect safety glasses and face shield for cracks and signs of wear. If damaged replace.

4. Keep all other staff away from the fogging area.
5. Ensure all electronics (computers, laptops, etc.) have been turned off or unplugged.
6. Post signs on the classroom doors with the time fogging was completed so staff can not enter until fog has dissipated.

   Hazard: Do not inhale the fog or aerosol when applying or prior to dissipation of fog. Micro-droplets can float in the air for up to 15 minutes and are quickly absorbed by the lungs which can result in significant injury.
7. Inspect machine to ensure there are no cracks/breaks in the plastic housing.
8. Inspect the C150 fogger's electrical cord and extension cord to ensure it is not frayed or cut.
9. Do not place any flammable liquids into the fogger's tank.
10. Check/inspect your tote to ensure all items are present:
    - 1-4L jug of Part 1 chemical
    - 1-4L jug of Part 2 chemical
    - Small bottle of Booster Chemical
    - 1 measuring cup (plastic or glass, no metal)
    - 1-4L measuring jug, (plastic or glass, no metal)
    - 1 funnel
    - Gasket enclosed safety glasses/face shield
    - Full face respirator with OV/P100 canister
    - Tychem 2000 full body suit.
    - 1 box of disposable nitrile gloves.
    - 1 roll duct tape
    - 1 roll hazard tape
    - Hazard: Do Not Enter Sign

SOLUTION PREP:

1. Don chemical resistant gloves and a full-face shield or safety glasses with sealed gaskets.
2. Pour the small bottle of peroxide booster (part 3) into the 4L jug marked Part 2. Once mixed this solution is good for approx. one year. Please mark the date of mixing on the 4L jug with a sharpie marker.
3. Calculate the amount of chemical required based on the size of the classroom you will be disinfecting.

Note: The machine uses approx. 0.5mL/sq. ft. (at 40 microns will cover 12,000) to 1.5mL/sq. ft. (at 50 microns will cover up to 4000sq ft.) The tank on the C150 Fogger can hold approx. 6L of solution.

4. Mix an equal amount of Part 1 with an equal amount of Part 2, using a measuring cup or jug, to get the desired final quantity needed (based on calculation in #2 above). Mix only what you will use immediately to avoid waste. **Important: Once mixed it must be used within 8hrs**.
5. Gently mix for 30 seconds. Do not mix fast as this will create foam and is wasteful.
6. Pour the mixture into the fogger tank using a funnel. Using warm water rinse out the mixing jug, measuring cups and funnel.
7. Close the tank cap firmly making sure an air tight seal is achieved.

   Note: Not closing it firmly could affect the machine's performance i.e. will not produce enough fog or fog will be trickling out of the nozzle.
8. Wet contact time is 30 seconds. Fog dwell time is 15-30 minutes - before the fog will dissipate, or overnight for classrooms. For immediate use (not recommended), ventilate the room by opening windows to remove any excess fog, wipe down any wet areas.

   Note: over time build up of surfactant will occur on glass and metal surfaces. When this happens simply wipe down with a wet cloth.

PROCEDURE FOR DISINFECTING CLASSROOMS:

1. Notify XL alarms and take the fire alarm system off-line.

   Note: the chemical can cause false alarms to occur. Taking the fire alarm system off-line prevents this from occurring. Depending on the length of time the system will be off line will determine whether a fire watch needs to be implemented. Any work over an hour will require a fire watch to be implemented in the rest of the school.

2. Don all PPE including, a full face respirator with P100 (HEPA) and OV cartridges (#60926 dual canister), chemical resistant gloves and Tychem 2000 body suit.

   Hazard: Perform a positive/negative fit test on your respirator once donned. Not doing so can result in an improper fit and allow chemicals to enter the mask while working.

3. Plug the power cord into an electric supply close to the door, preferably in the hallway. Ensure the plug is securely connected to the machine. Note: a loose connection at the machine will result in no power.

4. Using the shoulder strap place it diagonally over your body to offset the weight of the full machine.

   Hazard: working with a full machine with all the weight on one shoulder or arm will result in an ergonomic injury over time. Always wear the strap diagonally over the shoulders to distribute the weight over the full body. Switch shoulders back and forth.

5. Enter the classroom door and walk in approximately one third of the way into the classroom.

6. Turn on the machine by sliding the switch, on the top of the machine, to the high setting (2).
7. Adjust the droplet size by rotating the nozzle clockwise, to 50 microns (highest setting).
8. Point the fogger up and to the back farthest corner of the classroom. The room will slowly fill with fog and you should be able to see the fog to start rolling back towards you.
9. When the fog is approximately 3 meters from your, turn the fogger onto low speed (1). Fog to the left and right, while rotating the machine from side to side, and slowly start backing out of the room, while working the fog towards the exit. This will ensure an even spread of disinfectant.
10. For a room with desks, lower the fogger to approximately 2 feet from the floor (do not touch the floor) and fog on high 5-45µm moving the machine from left to right.
11. Once you have reached the classroom door, continue to fog until the fog reaches the doorway and you can no longer see through the room.
12. Turn off the machine, close the door and seal the top, sides and bottom openings with hazard tape.
13. Place a sign on the door with the fogging finished and let sit approx. 1 hour or over night before allowing staff back into the room. Place a Hazard: **DO NOT ENTER** sign on the door.

    Hazard: **entering the classroom too early while fog is still dissipating and while not wearing a respirator will results in serious injury.**
14. Estimated time to disinfect a classroom (100sq meters or average sized classroom) is 2 min.
15. If there are multiple rooms follow the same procedure. When the fog is 1m from you make your way to the next room. When there are no other rooms, continue steps 10-13 above until finished.

PROCEDURE FOR DISINFECTING MOLD:

1. Open a 6-8” section of the wall along the mold contaminated area
2. Follow steps 1-4 above.
3. Enter the classroom door and proceed to the mold contaminated area.
4. Turn on the machine by sliding the switch, on the top of the machine, to the high setting (2).
5. Adjust the droplet size by rotating the nozzle clockwise, to 50 microns (highest setting).
6. Point the nozzle of the fogger up and into the opening of the wall. The wall cavity should quickly fill with fog, saturating the mould. Fog both the upper and lower section of the cavity until you can see the fog to start rolling back out of the opening towards you.

7. Move to the next section and repeat step 6 above until all sections have been fogged. Fog the outside of the wall if there is visible mould present.

8. Once the cavity and wall have been fogged and the mould is saturated (visibly wet), turn the machine off, unplug, close the door and seal the door with hazard tape.

9. Place a sign on the door when finished and let sit over night before allowing staff back into the room. Place a Hazard: **DO NOT ENTER** sign on the door.

   Hazard: entering the classroom too early while fog is still dissipating and while not wearing a respirator will results in serious injury.

10. Removal of mouldy drywall can now continue without level 1, 2 or 3 abatement procedures.

PROCEDURE FOR GENERAL FOGGING (ALLERGINS, BED BUGS, LICE, ETC.)

1. Follow steps 1-4 above.

2. Start at the farthest point of the facility or room(s)

3. Set fogger to 40 microns when fogging a large space

4. Use the highest speed and point fogger to the farthest top point in the room, when fog starts to roll away from the highest point lower the fogger and fog at waist height. Move the fogger from left to right evening out the fog (if fogging below the waist turn the fogger to 5 micros (the lowest setting on the fogger)

5. Leave the room and continuing fogging throughout the building, adjust microns as mentioned above

6. Remember, work your way out of the facility towards your exit.

7. Allow the fog to dissipate overnight.

CLEAN-UP PROCEDURE:

1. Clean the fogger after every use. This will prolong the life of the machine.

2. When fogging is complete, turn the machine off and pour any liquid left in the tank into a collection bottle using a funnel.

3. Rinse the tank 3 times with warm or hot water and discard. Replace the cap and tighten.

4. Operate the fogger for approx. 1 minute with the nozzle opened to the largest droplet size setting (turn anti-clock wise to the lowest number). This will remove any existing liquid remaining in the fogger's internal tubes.

5. Fill the fogger with approx. 2 cups of warm water. Replace the cap and tighten. Operate the fogger for approx. 1 minute to clean the lines. Remove any excess water from the tank. Close the cap.

6. Wipe down the outside of the machine and power cord. Store machine in a warm, dry location. Note: Do not store the machine in a vehicle or unheated areas. Doing so will damage the machine.

7. Remove your respirator and wipe down with respirator wipes. Remove the cartridges, tape over openings and store in a separate zip lock bag.

8. Remove your Tychem body suit and wipe down if necessary. Fold up and store in your tote.

9. Remove your gloves and discard.

REGULATORY REQUIREMENTS

- WS&H Act W210, Section 4, 5, 7, 7.1
- Mb. Regulations 217/2006,
  - Part 2, Section 2.1 Safe Work Procedures
  - Part 6, Section 6.1 PPE
  - Part 16, Sections 16.1 – 16.18, Machine & Tool Safety
  - Part 35.0 WHMIS
  - Part 36.0 Chemical Biological Substances
- Operators Manual C20, C100 Plus, C150 Plus ULV Fogger