



**National
Environment
Agency**

Safeguard • Nurture • Cherish

Registration Number

VCO20210056

Date of Expiry

19/12/2024

The certificate is issued to 3000IMMUNITY PTE. LTD.

(Name of Registrant)

as a registered Vector Control Operator

at 60 KAKI BUKIT PLACE #02-13 EUNOS TECHPARK SINGAPORE 415979

(Address of Principal Place of Business)

for Director
Development Control and Licensing Division

CERTIFICATE ISSUED UNDER SECTION 29 PURSUANT TO THE POWERS UNDER CHAPTER 59 OF THE CONTROL OF VECTORS AND PESTICIDES ACT

THE CERTIFICATE IS ISSUED SUBJECT TO THE CONDITIONS STATED OVERLEAF.

CONDITIONS OF CERTIFICATE

- 1 This certificate or a certified copy shall be displayed in a conspicuous place at the principal place of business and every other place where the registrant conducts business.
- 2 Application for renewal of registration must be made at least 1 month before the expiry date of this certificate.
- 3 An applicant for registration or renewal of registration shall pay a fee according to the mode of payment stipulated by the National Environment Agency.
- 4 There will be no refund of fee to the registrant in the event that his/her registration is suspended or cancelled.
- 5 The registrant is to inform the Development Control and Licensing Division, National Environment Agency, immediately upon the cessation of business as a Vector Control Operator.
- 6 This certificate is not transferrable.
- 7 The registrant is to ensure that their vector control technicians and vector control workers comply with the "Guidelines on Good Practices for Thermal Fogging".
- 8 Fogging should be carried out only if it is necessary.
- 9 It is mandatory for the licensed vector control technician and certified vector control worker to wear the appropriate personal protective equipment (PPE) when carrying out fogging.
- 10 Pesticides used in fogging should be mixed according to the manufacturer's specification.
- 11 Sample of pesticide used in the fogging machine should be provided immediately to NEA's authorised officer for chemical analysis upon request.
- 12 Notify NEA electronically via the ePortal (<https://www.eportal.nea.gov.sg>) of any fogging operations 24 hours before it is performed, and when fogging is to be carried out on weekend or Public Holiday, notification is to be made 2 days in advance.
- 13 The registrant is to ensure that he/she complies with the medical examination requirements stipulated by the Ministry of Manpower (MOM).

GUIDELINES ON GOOD PRACTICES FOR THERMAL FOGGING

Notice on Fogging

- 1 In this circular, "fogging" refer to the use of a heat-generating equipment to vapourise a water-based or oil-based insecticide in order to dispense fog or smoke respectively, for the control of mosquitoes or other insects.
- 2 You are to notify NEA electronically via the ePortal (<https://www.eportal.nea.gov.sg>) of any fogging activity, 24 hours before it is performed, or 2 days in advance if fogging is to be carried out on weekends or public holidays.
- 3 Adequate notices must be put up in conspicuous places preferably one day in advance to inform the residents and public that fogging will be carried out in both landed and HDB estates, or in public congregation areas such as parks, sensitive areas such as in the vicinity of childcare centres, as well as areas with nearby food establishments. In addition, it is recommended to provide advance notice to residents preferably 15 - 20 minutes before fogging is carried out. For private apartments and condominiums, operators should liaise with the managing agent to notify residents beforehand.
- 4 You are reminded that all fogging operations should continue to be reported to Singapore Civil Defence Force (SCDF) one day in advance via email (with details of date, time and location) to < SCDF_Duty_Control_Room@scdf.gov.sg >.

Mixing and Preparing Insecticide

- 1 Ensure that the mixing and preparation of insecticide for fogging is carried out by a licensed Vector Control Technician (VCT), or a certified Vector Control Worker (VCW) under the supervision of a VCT.
- 2 Use clean and dry containers and measuring equipment.
- 3 For treatment of vectors, including mosquitoes, use only NEA-registered insecticides bearing the NEA registration mark and labelled for use against the target pest.
- 4 Observe the label instructions on the bottle/ container. Do not use insecticides beyond their expiry date.
- 5 Ensure that the insecticide is mixed with an appropriate carrier (i.e. diesel, kerosene or water) in the correct proportion, according to instructions stipulated by the manufacturer.
- 6 Do not under- or over-dilute the insecticide.
- 7 Do not attempt to mix your own concoction of insecticides, unless permitted by the manufacturer, as it may affect the efficacy of the insecticide.
- 8 Always use freshly mixed insecticide. Do not use any mixture that has been left overnight.
- 9 Keep people and animals away when mixing the insecticide solution.
- 10 Wear chemical-resistant gloves and protective clothing when mixing/ preparing the insecticide solution. Avoid skin contact or inhaling the insecticide fumes.

DOs in Fogging

- 1 Always wear appropriate Personal Protective Equipment (PPE) which includes respirator, safety goggles, gloves, coveralls, safety boots, earplugs, visor and safety helmet where applicable (e.g. at a construction site) when fogging.
- 2 Make sure you know how to operate the fogging machine and observe all safety precautions before you start fogging.
- 3 Carry out fogging when the ambient temperature is low, whenever possible, i.e. early morning or early evening. It is also the time when mosquito activity peaks. During midday or when the temperature is high, convection currents from the ground will cause air parcels to rise quickly, hence dispersing the fog.
- 4 Sufficient fogging machine should be used to ensure complete coverage. It should be conducted in an encirclement strategy. i.e. fog from outside to inside, and from top floor to bottom floor.
- 5 Concentrate fogging in areas where mosquitoes are likely to harbour such as plants, bushes, vegetation, drains, culverts, shaded external walls etc.
- 6 Keep people and animals away prior to fogging
- 7 Do not point fogging machine towards or in the direction of people, including passersby or members of the public.
- 8 Direct or guide vehicular traffic when fogging near roads and advise the public to move away from the fog.
- 9 Always wash hands thoroughly with soap and water after preparation of insecticide solution and after fogging, as there may be traces of insecticide on your hands.
- 10 Avoid contact with and contamination from spillage of the carrier and insecticide, leaky container or the discharge from the machine.
- 11 Where necessary, advise the premises on the necessary precautions to adopt after fogging. For instance, advise childcare premises to wash toys and equipment to prevent any residue from fogging from coming in contact with children.

DON'Ts in Fogging

- 1 Do not fog inside food/ eating establishments, unless the place has been cleared of people, food, cooking equipment and utensils, and prepared for fogging.
- 2 Do not use flammable solvent as a carrier for fogging in refuse chutes and other confined spaces; use a non-flammable solvent or water-based fogging instead.
- 3 Do not commence fogging in refuse chutes without ensuring adequate ventilation of chutes before fogging, as part of the safe work procedures to prevent flash fire and explosion.
- 4 Do not overfill the solution tanks (for both chemicals and petroleum); always fill to not more than 3/4 tank capacity to prevent spillage and ensure that the caps of solution tanks are secured.
- 5 Do not fog into strong winds or against wind direction. Fogging in windy conditions causes the fog to be blown uncontrollably to non-target areas, potentially causing harm to humans, non-target insects, plants and pets.
- 6 Do not carry out fogging in the vicinity of water tanks, when the transfer pumps are in operation. Ensure that all water tank openings including tank warning/ overflow pipes and drain outlets are properly sealed/ covered during the fogging operation.
- 7 Do not tilt the fogging machine upwards while fogging; this is to prevent the back flow of diesel, which can cause the machine to malfunction.
- 8 Do not continue fogging if the machine does not function properly.
- 9 Do not refill the solution tank with solvent when the machine is still hot; allow sufficient time for the machine to cool before refilling to prevent accidental ignition of any spilled flammable carrier.
- 10 Do not transport the machine in an enclosed vehicle when it is still hot.
- 11 Do not walk directly into the fog.
- 12 Do not smoke, eat or drink during a fogging operation.
- 13 Do not discharge any insecticide into any drain or ground. It should be collected for proper disposal by NEA-licensed toxic industrial waste collector (TIWC). The list of licensed toxic industrial waste collectors (TIWC) can be found on the NEA website at: <https://www.nea.gov.sg/docs/default-source/our-services/list-of-tiw-collectors.pdf>.
- 14 Do not allow new or inexperienced technicians/ workers to operate the machine without close supervision and training.

Emergency Procedure

- 1 Flush eyes and face immediately with clean running tap water for 2 - 5 minutes if in contact with insecticide. In such cases, notify your supervisor immediately and seek medical attention where necessary.
- 2 In the case of flash fire, stay away from heat source and cool the burn area with cool or lukewarm running water for at least 20 minutes to stop the burn. Apply a cool, wet compress until pain eases. Notify your supervisor and seek medical attention immediately.

Advisory on Fogging

- 1 Fogging should not be relied upon as the main control method for mosquitoes or other pests.
- 2 Where possible, source reduction (i.e. search and destroy breeding habitats) should be the main strategy of pest control, especially for mosquitoes.
- 3 Excessive fogging may accelerate the development of insecticide resistance in insect population, following which, insecticide that is normally effective against the population shall no longer achieve the expected level of control.
- 4 Fogging in an outdoor environment not only kills the target pest (e.g. mosquitoes), but also affects non-harmful insects such as dragonflies. Hence, fogging should be carried out judiciously.
- 5 For mosquitoes, fogging should only be carried out in areas with dengue outbreak, or when the adult population is high and requires immediate reduction.
- 6 Intensive source reduction still has to be carried out to remove all potential breeding habitats and breeding habitats to break the life cycle of the mosquito completely. For breeding habitats that cannot be removed, application of Anti-Malarial Oil (AMO) or suitable larvicide (e.g. temephos sand granule, *Bti* mosquito dunk, insect growth regulators) should be carried out as a preventive measure. Breeding habitats caused by structural defects should be highlighted to premises owners for their rectifications or repairs.