

NPD Customer Report

Droplet Analysis

E- Series Eliminator Applicators and HDP 1830 Misting Tip, 18v Rechargeable - Operating System, HDP 1830 Misting Tip are a customized set
4 Models – 1 Gallon, 2.5 Gallon, 4 Gallon and 8 Gallon

Drift Criteria and Average Values at 15 feet

- **AVG Relative Span of 1.01 - Excellent**
- Very low variability of droplet sizes and volume supports the integrity of a consistent spray pattern.
- Allows for better coverage and less drift, particularly advantageous when performing barrier or perimeter treatments in suburban settings where vegetation and landscape can vary extensively.
- **AVG DV.1 - 141.76 μm**
- Supports low potential for drift since 10% of the droplets measured were of this value or smaller.
- **AVG DV.5 - 255.26 μm**
- Critical industry standard value where 50% of the droplets produced by the HDP 1830 tip were of this value or smaller.
- The quality of the spray is categorized as MEDIUM (VMD of 236-340 microns) by ASABE (American Society of Agricultural and Biological Engineers).
- According to the Pesticide Environmental Stewardship website "...an important consideration for reducing drift is to use nozzles that produce higher VMDs (for example, greater than 300 microns).
- **AVG DV.9 - 405.65 μm**
- 90% percent of the droplets (DV 0.9) produced were of this value or smaller.
- **AVG Droplet Density – 59.30 droplets/cm**
- Droplet density defines how effective the spray application is overall.
- Most importantly, an adequate droplet density determines how efficacious the application will be against the target organisms.
- **AVG Volume Density – 1.30oz/100 sq ft**
- Data shows that the HDP 1830 spray tip can be confidently used when applying a variety of pesticides for barrier or perimeter treatments.
- This value directly relates to the pesticide being applied according to the equipment and pesticide manufacturer's recommendations, minimizing over-application (excessive exposure to the environment) and under-application (development of pesticide resistance).

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Summary

The **HDP Misting Tip 1830** 1830 is capable of consistently producing droplets within a definable spectrum conducive to mosquito and vector control activities using a water-based material. Drift is minimal based on 50% of the droplets (VMD) being over 250 microns (MEDIUM) at 15 feet from the point of the nozzle. The density of droplets as well as the volume of material applied by the **Eliminator Series Applicators** and **HDP Misting Tip 1830** are compatible with pesticide label recommendations.

The recent introduction of exotic mosquito-borne viruses such as Zika and dengue has brought a new awareness to controlling container mosquito species at the point source – i.e., our backyards. Unfortunately, mosquito adulticide control has become more challenging due to pesticide resistance being documented at a rapid rate across the US and throughout the world. Interestingly, all mosquito adulticide products are required to list the maximum allowable VMD on the label while only a handful of mosquito-larvicide products include droplet data on the label and almost all barrier treatment product labels are devoid of this language and requirement. **The NPD Powered Eliminator Series of Misting Mosquito Applicators provide VMD and Droplet Data Analysis, making it the first Verified Droplet Analysis 18V rechargeable battery operated Mosquito Applicator.**

Prepared by: Third Party.