

Memorandum on hydrogen peroxide type for use with the Agriwater RainBox

Using the wrong peroxide can cause issues with efficacy in the case of stabilized peroxide. In the case of food grade peroxide handling and storage become challenging and its sensitivity can cause the dosing pump to lose prime (due to high levels of off-gassing).

Use only industrial or technical grade hydrogen peroxide. Do NOT use stabilized, inhibited or food grade hydrogen peroxide.

Discussion:

Industrial or technical grade hydrogen peroxide (recommended)

Industrial hydrogen peroxide solutions are, in fact, manufactured with different types of stabilizers incorporated in their formulations. These stabilizers are not required to be included on the product labels or SDS forms because they are present in insignificant amounts and do not interfere with reactivity of the hydrogen peroxide when the product is dosed into a reactive environment.

Use of these industrial or technical grade products are ideal in Agriwater water treatment units because it will ensure good shelf life of the peroxide while still getting optimum response, 'instability' and reactivity inline.

Stabilized hydrogen peroxide (not recommended)

Hydrogen peroxide products that are advertised specifically as stabilized hydrogen peroxide will mostly have much stronger stabilization components added to them to ensure a more persistent peroxide residue is maintained when dosed into reactive environments. These types of strongly stabilized products are not recommended for use with Agriwater water treatments systems.

Food grade hydrogen peroxide (not recommended)

On the other side of the spectrum, food grade hydrogen peroxide solutions do not contain any stabilizers or additives. This would be perfect for their function in Agriwater water treatment systems, but because of their instability even before being added to a reactive environment, these products are also not ideally suited for this application. Additionally, the quick reaction can cause significant levels of off-gassing in the intake line of the dosing pump, potentially causing it to lose prime.

Summary

- Use of **“Stabilized”** or **“inhibited”** Hydrogen Peroxide products are **not** recommended for use with Agriwater water treatments systems – products specifically advertised as STABILIZED or INHIBITED on their label.
- Use of **“Food Grade”** Hydrogen Peroxide products are **not** recommended for use with Agriwater water treatments systems.
- **Industrial** or **technical** grade hydrogen peroxide solutions **is** recommended for use with Agriwater water treatment systems.
 - Eg.
 - Univar technical grade
 - Evonik Hyprox 500

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