



OXYGEN'S bio-based Pesticide Adjuvants & Carriers. Go Green '

PRODUCT DESCRIPTION

OXYGEN bio-based pesticide adjuvant and carrier is a bio-based alternative for toxic chemicals currently used as pesticide adjuvants. An adjuvant is a substance other than water which is not itself a pesticide but enhances or is intended to enhance the effectiveness of pesticides with which it is used. Adjuvants for use with pesticide have been categorised as extenders, wetting agents, sticking agents & fogging agents etc.

ADJUVANTS AND SPRAY APPLICATIONS

Spray application is perhaps the weakest link in the chain of events a pesticide follows through its development process. Some researchers claim that up to 70 percent of the effectiveness of pesticide depends upon the effectiveness of the spray application. Adjuvants can minimise or eliminate many spray application problems associated with pesticide stability, solubility, incompatibility, suspension, foaming, drift, evaporation, volatilisation, degradation, adherence, penetration, surface tension and coverage. Adjuvants are generally designed to perform specific functions including wetting, spreading, sticking, reducing evaporation, reducing volatilisation, buffering, dispersing, reducing spray drift, and reduce foaming. Adjuvants currently marketed in India are formulated to perform a single specific function. This makes it tedious for the farmer to mix different adjuvants to get desired results.

OXYGEN pesticide adjuvant has been formulated to perform almost all the functions which different adjuvants perform individually.

ADJUVANT PROPERTIES:-

[A] SURFACTANTS

These chemicals, also known as wetting agents & spreaders, physically alter surface tension of a spray droplet. For a pesticide to perform its function properly, spray droplet must be able to wet the foliage and spread evenly over the leaf, These increases the pesticide coverage area.

OXYGEN bio-based ADJUVANT is an anionic surfactant which works best when used with contact pesticide.

[B] STICKER

A sticker is an adjuvant that increases the adhesion of solid particles to target surfaces. These adjuvants can decrease the amount of pesticide that washes off during irrigation or rain. Stickers can also reduce evaporation of pesticide..

OXYGEN bio-based ADJUVANT has adhesive and non-evaporating properties which helps in making it effective as sticker adjuvant.

[C] PLANT PENETRATION

OXYGEN bio-based ADJUVANTS have a molecular configuration that enhances penetration of pesticides into plants. This helps in protecting internal parts such as roots from pests.

[D] COMPATIBILITY AGENTS

Pesticides are commonly combined with liquid fertilisers or other pesticides. However, certain combinations can be physically or chemically incompatible, causing clumps and uneven distribution in the tank. Occasionally, the incompatible mixture will plug the pump and distribution lines, resulting in expensive cleanup and repairs. OXYGEN bio-based ADJUVANTS has a KB solvency value which makes it a good solvent and compatibility agent.

[E] DRIFT RETARDANTS

Drift is a function of droplet size. Drops with diameters of 100 microns or less tend to drift away from targeted areas. Drift retardants or deposition aids improve on target placement of by increasing average droplet size.

The drift retardant properties help it effectively treat the plantations and prevent wash away of pesticides.

[F] THICKENERS.

Thickeners are used to increase the viscosity of spray mixtures. These adjuvants are used to control drift or slow evaporation after spray have been deposited on the target area. Slowing evaporation is important when using pesticide because they penetrate plant cuticle only as long as they remain in a solution.

[G] DEFOAMING AGENTS

Some pesticide formulations will create foam or frothy head in some spray tanks. This is mainly because of type of surfactant used in formulation and the agitation system of the spray tank. Formation of foam would decrease effectiveness of pesticides. So, defoamers need to be used to prevent that avoidable foam formation.

OXYGEN bio-based ADJUVANT helps in preventing foam formation and thereby increasing pesticide effectiveness.

FEATURES & USES

- It has high solvency properties. (KB value of 58) which makes it suitable to replace most organic s
- Low **VOC** (Volatile Organic Compounds) content ensures workers/users safety.
- Regularly used pesticides adjuvants are toxic petroleum based chemicals. **OXYGEN's** Pesticide Adjuvant & Carrier is non-toxic and thus prevents toxic Petroleum based chemicals from entering the food chain, atmosphere & surface water.
- It has a very low evaporation rate. This means lower application volumes and increases the effectiveness of the product.
- It is bio-degradable so using this doesnot harm the environment.



TYPICAL PROPERTIES

PHYSICAL PROPERTIES	VALUE
KAURI-BUTANOL VALUE	58
VOCs	< 50 g/ml
FLASH POINT	> 130 DEG. CELCIUS
SPECIFIC GRAVITY	0.88
VISCOCITY	3.69-4.8 Cst @ 40 ° C
APPEARANCE	Clear, "Tea" Colour Liquid
COPPER STRIP	1A
IODINE VALUE	95 - 110



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