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To overcome herbicide resistance (or tolerance) in weeds and for controlling herbicide resistant crops, new and more advanced formulations containing challenging active ingredient combinations are becoming increasingly popular. One particular example is the desire to suspend a water-insoluble solid active ingredient in a high-electrolyte (salt) solution (HES), wherein examples of the latter could include fertilizer, or arguably more relevant in the agrochemical field, a water soluble pesticide. Key examples of pesticidal HES systems might include solutions of glyphosate, glufosinate-ammonium or paraquat dichloride in which a specifically chosen water-insoluble herbicide would be suspended. However the primary limitation is that conventional dispersants are antagonised by high-electrolyte concentrations, and therefore attempts at preparing such formulations would typically lead to agglomeration or flocculation.

TERSPERSE® 3030 dispersant has been found however to be particularly effective at providing improved dispersibility and suspensibility in high-electrolyte solutions. This technology readily suspends triazines such as terbuthylazine at 200 g/L in glyphosate isopropylamine salt solution at 360 g/L. Likewise, triazines can also be readily suspended in aqueous glufosinate-ammonium salt solutions at similar rates. Other non-triazine examples including the suspension of urea herbicides such as diuron in a salt solution of a bipyridyl such as paraquat dichloride.

TERSPERSE® 3030 dispersant is also advantageous in that it may display adjuvancy. The material can therefore serve a unique dual purpose by not only suspending the water-insoluble solid active ingredient, but also enhancing the biological effect of at least one of the active ingredients.

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