



Dispersants and wetting agents for SC and WDG

Morwet® naphthalene sulfonates are specifically designed to serve as wetting and dispersing agents in aqueous dispersions and dry formulations. They are known for their versatility and formulation robustness with a wide range of crop protection active ingredients.

Aqueous dispersions

Generally Morwet D-425 can be used to formulate water based suspensions (SC). At 2-3% w/w for a 480 g/l SC and 3-5% w/w for a 720 g/l SC, Morwet D-425 will act as wetting and dispersing agent as well as milling aid. In case better wetting of the active ingredient is required in the premix, addition of Morwet EFW can be considered. Other good wetting agents for SC applications are of the alcohol ethoxylate type or block copolymer (e.g. Ethylan® NS 500 LQ). These wetting agents can be added at a rate of 1% w/w.

Morwet D-425 is known to provide good formulation stability. It significantly reduces crystal growth during storage. Morwet D-425 is an excellent dispersant for a wide variety of active ingredients and the product ensures good dispersibility in both soft and hard water. Alternatively our new high performance dispersant, Morwet D-809, is very effective in hard water applications, even at lower surfactant concentrations.

To substitute specialty lignosulfonates in SCs we offer Morwet D-360, which is a proprietary process blend of lignin and naphthalene sulfonates and can be used individually or in combination. Morwet D-360 shows better performance compared to specialty lignosulfonates (e.g. lower viscosity in SC applications).

Another good and cost effective dispersant is Morwet D-400. It is chemically similar to Morwet D-425 but contains a lower amount of naphthalenesulfonate. Its performance is comparable to most Morwet D-425 look-a-likes.

SC guide recipes

Imidacloprid SC	w/w
Imidacloprid	40%
Morwet D-425	2.5%
Ethylan NS-500LQ	1%
Propyleneglycol	5%
Proxel GXL	0.04%
Xanthan gum	0.3%
Silicone antifoam	0.2%
Water	up to 100%

Bifenthrin SC	w/w
Tebuconazole	38%
Morwet D-425	2.5%
Morwet EFWI	1%
Propyleneglycol	5%
Proxel GXL	0.04%
Rhodopol 23	0.2%
Silicone antifoam	0.2%
Water	up to 100%



Solid formulations

Good wetting, dispersing and suspension performance are key requirements of dry formulations. The Morwet wetting and dispersing agents are an excellent choice when formulating wettable powders (WP) and water dispersible granules (WDG).

Combining the wetting properties of Morwet EFW with the dispersing characteristics of Morwet D-425 is generally the best option. In WP formulations it is recommended to use 1-2% of Morwet EFW and 2-3% of Morwet D-425. For WDG applications the required concentrations will be slightly higher: 2-3% of Morwet EFW and 3-5% of Morwet D-425.

Alternative wetting agents to Morwet EFW are Morwet DB (for low active concentration systems), Morwet IP (for reduced foaming) and Morwet 3028 (to improve granule disintegration in high active concentration systems).

As in SCs the lignin/naphthalene sulfonate proprietary process blend, Morwet D-360, can be used to replace specialty lignosulfonates. Compared to those Morwet D-360 and often offers better suspensibility and dispersibility, especially upon storage.

Also in solid formulations, Morwet D-400 is a good and cost effective alternative to Morwet D-425 look-a-likes. Morwet D-809, our most recent dispersant, allows formulators to produce high performance WDGs in hard water conditions.

In some agro markets there is a strong preference for white WDG. As Morwet dispersants have a tendency to bring a slightly brownish colour to the formulations it is possible to substitute them with either Agrilan® 700 or Agrilan 789 (polycarboxylates). These Agrilan products will ensure equally good performance and a very white looking formulation.

WDG guide recipes

Mancozeb WDG	w/w
Mancozeb	80%
Morwet D-809	8%
Morwet 3028	3%
Kaolin clay	9%

Imidacloprid WDG	w/w
Imidacloprid	70%
Agrilan 700	6%
Morwet EFW	3%
Kaolin clay	21%

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Nouryon

Nouryon is a global, specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products, such as personal care, cleaning goods, paints and coatings, agriculture and food, pharmaceuticals, and building products. Furthermore, the dedication of more than 7,900 employees with a shared commitment to our customers, business growth, safety, sustainability and innovation has resulted in a consistently strong financial performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands. Visit our website and follow us @Nouryon and on LinkedIn.

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