

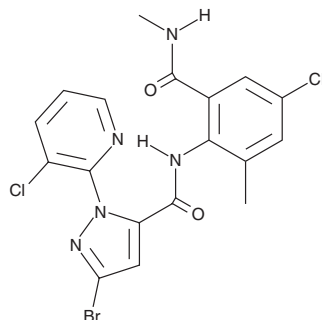
# PRODUCT INFORMATION



## Cyantraniliprole

Item No. 27309

**CAS Registry No.:** 736994-63-1  
**Formal Name:** 3-bromo-1-(3-chloro-2-pyridinyl)-N-[4-cyano-2-methyl-6-[(methylamino)carbonyl]phenyl]-1H-pyrazole-5-carboxamide  
**Synonym:** DPX-HGW86  
**MF:** C<sub>19</sub>H<sub>14</sub>BrClN<sub>6</sub>O<sub>2</sub>  
**FW:** 473.7  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 262 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Cyantraniliprole is supplied as a solid. A stock solution may be made by dissolving the cyantraniliprole in the solvent of choice, which should be purged with an inert gas. Cyantraniliprole is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of cyantraniliprole in these solvents is approximately 5 and 30 mg/ml, respectively.

Cyantraniliprole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cyantraniliprole should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Cyantraniliprole has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Cyantraniliprole is an anthranilic diamide insecticide and an allosteric ryanodine receptor (RyR) activator.<sup>1</sup> It induces calcium release from intracellular stores in Sf9 cells expressing *H. virescens* or *D. melanogaster* RyRs but not Sf9 cells that do not express RyRs. It is 300- to 500-fold selective for insect over mouse RyR1, greater than 2,000-fold selective for insect over rat RyR2, and inactive in human IMR32 cells expressing RyR2 and RyR3. It is active against insects of the order Lepidoptera, including the diamondback moth with a 50% plant protection value (PP<sub>50</sub>) of less than 0.1 ppm. It is also active against insects in the order Hemiptera, inducing mortality of the green peach aphid, cotton melon aphid, and white fly (EC<sub>50</sub>s = 1.1, 0.4, and 5.8 ppm, respectively). Formulations containing cyantraniliprole have been used as insecticides in greenhouse and nursery crops.

### Reference

1. Lahm, G.P., Selby, T.P., Stevenson, T.M., *et al.* Pyrazolylpyridine activators of the insect ryanodine receptor. *Bioactive heterocyclic compound classes: Agrochemicals*. Lamberth, C. and Dinges, J., editors, 1st edition, Wiley-VCH Verlag GmbH & Co. KGaA (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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