PhytoTechnology Laboratories®
“Helping To Build A Better Tomorrow Through Plant Science”™

Product Information Sheet

T828
Trifluralin

Synonym: α,α,α-Trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine
CAS: 1582-09-8
Formula: C_{13}H_{16}F_{3}N_{3}O_{4}
Molecular Wt: 335.28

Properties
Form: Powder
Appearance: Dark Orange Powder
Application: Plant Growth Regulator
Solubility: DMSO
Storage Temp: Room Temperature
Typical Working Concentration: Varies by application. Concentration should be determined by end user.
Other Notes: Plant Tissue Culture Tested; For Research Use Only

Application Notes
Trifluralin is a growth retardant. Its main mode of action is to disrupt cell mitosis by inhibiting the polymerization of microtubules which causes misconfiguration and losses of function, thus misaligns and separates the chromosomes, and ultimately inhibits the formation of the mitotic spindles.\(^2\,^3\)

Trifluralin has been reported to affect mostly radicle development on both main and secondary roots. For seed culture, trifluralin inhibits seed germination, radicle and hypocotyl cell formation.\(^2\) It has also been reported that trifluralin is more effective on monocotyledon (e.g. maize, wheat, barley, sorghum) than dicotyledon plants. A treatment of maize root with 5µM of trifluralin has been shown to decrease root length and enlarge the radicle.\(^4\)

Please Note: While PhytoTechnology Laboratories™ tests each lot of this product with two or more plant cell/tissue culture lines, it is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References
1. Merck 13, 9757