Chemical Factsheet

Penoxsulam

General Information

- Product Names:
  Grasp (Dow)
  Granite (Dow)
  Sapphire (Dow)
  Pindar (Dow)
  Galleon (Sepro)
- Uses: Aquatic Vegetation
- Beyond Pesticides rating:

Health and Environmental Effects

See citations at end of document.

- Cancer: Yes (**1**)
- Endocrine Disruption: Not documented
- Reproductive Effects: Not documented
- Neurotoxicity: Not documented
- Kidney/Liver Damage: Yes (**1**)
- Sensitizer/ Irritant: Not documented
- Birth/Developmental: Not documented
- Detected in Groundwater: Yes (**2**)
- Potential Leacher: Not documented
- Toxic to Birds: Not documented
- Toxic to Fish/Aquatic Organisms: Yes (**2**)
- Toxic to Bees: Not documented

Additional Information

- Regulatory Status:
  - Penoxsulam; Federal Register Pesticide Tolerance (2020)
  - EPA Pesticide Factsheet (2004)
- Supporting information:
  - National Center for Biotechnology Information, PubChem Compound Database
  - PAN Pesticides Database:Penoxsulam (Pesticide Action Network)
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - Enhanced Herbicide Metabolism and Target Site Mutation Enabled the Multiple Resistance to Cyhalofop-butyl, Florpyrauxifen-benzyl, and Penoxsulam in Echinochloa crus-galli. Yu, X. et al. (2024) Enhanced Herbicide Metabolism and Target Site Mutation Enabled the Multiple Resistance to Cyhalofop-butyl, Florpyrauxifen-benzyl, and Penoxsulam in Echinochloa crus-galli, Journal of Agricultural and Food Chemistry. Available at: https://pubs.acs.org/doi/abs/10.1021/acs.jafc.4c02450.
  - The non-target site resistance mechanism to Penoxsulam in Echinochloa crus-galli var. zelayensis. Lyu, Q., Jiang, B., He, P. et al. The non-target site resistance mechanism to

Penoxsulam in Echinochloa crus-galli var. zelayensis. Plant Soil (2024). https://doi.org/10.1007/s11104-024-06716-5
- Biochemical and Histological Evaluation of Penoxsulam Herbicide on an Animal Model. Chaurasia, V., Aggarwal, M. and Garg, M. (2022) Biochemical and Histological Evaluation of Penoxsulam Herbicide on an Animal Model, Journal of Pharmaceutical Research International. Available at: https://www.researchgate.net/publication/358594997_Biochemical_and_Histological_Evaluation_of_Penoxsulam_Herbicide_on_an_Animal_Model.
- Acute Renal Failure following Penoxsulam poisoning. Karunatilake, H. (2011). Acute Renal Failure following Penoxsulam poisoning. Clinical Toxicology, 50(1), 79. https://doi.org/10.3109/15563650.2011.633492
- Toxic Effects of Penoxsulam Herbicide in Two Fish Species Reared in Southern Brazil. Murussi, C.R., Thorstenberg, M.L., Leitemperger, J. et al. Toxic Effects of Penoxsulam Herbicide in Two Fish Species Reared in Southern Brazil. Bull Environ Contam Toxicol 92, 81–84 (2014). https://doi.org/10.1007/s00128-013-1137-x

Gateway Health and Environmental Effects Citations

1. US EPA, Office of Prevention, Pesticides and Toxic Substances, Reregistration Eligibility Decisions (REDs), Interim REDS (iREDs) and RED Factsheets. https://archive.epa.gov/pesticides/reregistration/web/html/status.html.

2. National Center for Biotechnology Information, PubChem Compound Database. Available at: https://pubchem.ncbi.nlm.nih.gov/.

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