Health Based Guidance for Water
Health Risk Assessment Unit, Environmental Health Division
651-201-4899

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Toxicological Summary for:

Pyroxasulfone M1

CAS: **1379794-40-7**
Synonyms: [5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)pyrazol-4-yl]methanesulfonic acid; KIH-485-M1

Pyroxasulfone M3

CAS: **1379794-41-8**
Synonyms: 5-(Difluoromethoxy)-1-methyl-3-(trifluoromethyl)-1H-pyrazole-4-carboxylic acid; KIH-485-M3

MDH finds there is insufficient toxicity information available for pyroxasulfone M1 and M3 to develop chemical-specific guidance for groundwater. The pyroxasulfone M1 and M3 guidance values will be issued as Risk Assessment Advice (RAA) and will be based on the Health-Based Values (HBVs) of the parent compound, pyroxasulfone. This approach is consistent with the approach outlined in the Minnesota Statute 103H.201 Health Risk Limit Rules, Section 4717.7900 Chemical Breakdown Products.

Acute Non-Cancer Risk Assessment Advice ($nRAA_{Acute}$) = Not Derived (Insufficient Data)

Short-term Non-Cancer Risk Assessment Advice ($nRAA_{Short\text{-}term}$) = 40 µg/L

Subchronic Non-Cancer Risk Assessment Advice ($nRAA_{Subchronic}$) = 40 µg/L

Chronic Non-Cancer Risk Assessment Advice ($nRAA_{Chronic}$) = 40 µg/L

Cancer Risk Assessment Advice (cRAA) = Not Applicable

Volatile: Yes (low)

Summary of Guidance Value History:

Pyroxasulfone metabolites M1 and M3 were evaluated through pesticide rapid assessments (PRAs) in 2023 and 2025, respectively. The noncancer PRA values for both degradates were both set to the value derived for the parent compound, pyroxasulfone (5 µg/L). In 2025, Short-term, Subchronic, and Chronic nRAAs were derived. The Short-term, Subchronic, and Chronic nRAAs have changed from the 2023 and 2025 PRAs as a result of 1) using MDH's most recent risk assessment methodology (multiduration guidance), and 2) incorporation of more toxicity information.

Summary of toxicity testing for health effects identified in the Health Standards Statute (144.0751):

Even if testing for a specific health effect was not conducted for this chemical, information about that effect might be available from studies conducted for other purposes. MDH has considered the following information in developing health protective guidance.

	Endocrine	Immunotoxicity	Development	Reproductive	Neurotoxicity
Tested for specific	No	No	No	No	No
Effects observed?	-[1]	-[1]	-[1]	-[1]	-[1]

Comments on extent of testing or effects:

[1]Guidance values for pyroxasulfone M1 and M3 are derived using data from the parent compound, pyroxasulfone. Pyroxasulfone M1 and M3 were not tested for endocrine-, immunotoxicity-, developmental-, reproductive-, or neurotoxicity-related effects. For discussion of these effects following exposure to pyroxasulfone, please see the pyroxasulfone summary sheet at: Toxicological Summary for Pyroxasulfone (https://www.health.state.mn.us/communities/environment/risk/docs/guidance/gw/puroxasulfone.pdf)

Resources Consulted During Review:

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New Zealand Environmental Protection Authority (Te Mana Rauhī Taiao). (2018). *Decision on application for approval to import or manufacture Sakura 850 WG for release (APP202266)*.

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United States Environmental Protection Agency (EPA). (2012). *Benchmark Dose Technical Guidance*. Retrieved from https://www.epa.gov/sites/default/files/2015-01/documents/benchmark_dose_guidance.pdf

United States Environmental Protection Agency (EPA). (2018). *Human Health Risk Assessment for the Section 3 New Uses of Pyroxasulfone on Crop Subgroup lC, tuberous and corm vegetables and Crop Group 3-07, bulb vegetables.* Washington, D.C. Retrieved from https://www.regulations.gov/document/EPA-HQ-OPP-2015-0787-0027

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