Flumetsulam


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Names
- CAS No. 98967-40-9
- Flumetsulam
- N-(2,6-difluorophenyl)-5-methyl-1,2,4-triazolo-[1,5a]-pyrimidine-2-sulfonamide
- Python™ WDG
- Preside™
- Broadstrike™

Product Overview
- Flumetsulam is the common name for the active ingredient in several broadleaf herbicides registered to Dow AgroSciences LLC, a wholly owned subsidiary of The Dow Chemical Company. For further details, see Product Description.
- Flumetsulam is a white to tan powder with a sweet odor. For further details, see Product Description.
- Flumetsulam is used to control species broadleaf weeds on crops such as corn or soybeans. For further details, see the country-specific Product Label, Product Uses or Contact Us.
- Those working in manufacturing, packaging, or distribution operations could be exposed to Flumetsulam. Applicators may be exposed to Flumetsulam during field application. Workers using Flumetsulam based products must wear proper protective equipment and follow label instructions carefully. For further details, see the country-specific Product Label, Product Uses or Contact Us.
- Contact with Flumetsulam may cause slight eye irritation. Prolonged contact is essentially nonirritating to the skin. Very low toxicity if swallowed. For further details, see Health Information or the Safety Data Sheet.
- Flumetsulam is highly toxic to aquatic organisms on an acute basis. It is practically non-toxic to birds on an acute basis. For further details, see Environmental Information or Product Label.
- Flumetsulam is stable under recommended storage conditions. Exposure to elevated temperatures can cause products to decompose. Consult the Product Label for specific use and storage information. For further details, see Physical Hazard Information.

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Product Safety Assessment: Flumetsulam Ingredient

Manufacture of Product
- **Capacity** – Dow AgroSciences, a wholly owned subsidiary of The Dow Chemical Company, manufactures and formulates flumetsulam at facilities located in countries including the United States of America.
- **Process** – Flumetsulam is produced using proprietary processes and materials. The chemical structure is shown below:

![Chemical Structure](image)

Product Description
Flumetsulam is the common name for N-(2,6-difluorophenyl)-5-methyl-1,2,4-triazolo-[1,5a]-pyrimidine-2-sulfonamide, the active ingredient in several herbicides registered to Dow AgroSciences LLC. It is formulated and sold under several trade names, such as Python® WDG, Preside® and Broadstrike®. Flumetsulam controls plant growth by inhibiting an enzyme needed by plants to synthesize amino acids which are required for growth.

Product Uses and Regulatory Information
Flumetsulam products are registered for use on a global basis. Examples of countries with registrations include Argentina, Canada, and the United States. Flumetsulam was first launched in 1994 in the United States to provide broadleaf weed control in corn and soybeans. Flumetsulam has also been registered in several other countries for preemergence or postemergence weed control in a range of crops including wheat, barley, peanuts, alfalfa, clover, and chicory.

Flumetsulam has been comprehensively evaluated under regulatory frameworks used for registration and approval of herbicide products in the United States. These legal frameworks require both laboratory and field testing as per established EPA guidelines to determine the potential for use to result in human health or environmental impacts.

Regulations exist that govern the manufacture, sale, transportation, use, and/or disposal of Flumetsulam products. In addition to federal regulation, additional regulations may apply which vary by state or locality. Information may be found by consulting the relevant Product Label, Safety Data Sheet, or Contact Us.

Exposure Potential
Flumetsulam is used in the production of commercial herbicides. Based on uses for flumetsulam, the public could be exposed through:

- **Workplace exposure** – Exposure could occur in a facility that manufactures or formulates Flumetsulam. Those working with flumetsulam in manufacturing operations could be exposed during maintenance, sampling, testing or other procedures. Each manufacturing and formulation facility should have a thorough training program for employees and appropriate work processes and safety equipment in place to limit exposure. Agricultural workers could be exposed while applying this product in the field. Wearing proper protective equipment and following label instructions will reduce the potential for exposure. See Health Information and Product Label.
Product Safety Assessment: Flumetsulam Ingredient

- **Consumer exposure to products containing flumetsulam** - The Environmental Protection Agency (EPA) concludes that there is a reasonable certainty that no harm will result to the general population and to infants and children from aggregate exposure to Flumetsulam residues. See Health Information.

- **Environmental releases** – For spills, please consult the country-specific Safety Data Sheet or Product Label for more information about protective equipment and procedures. See Environmental, Health, and Physical Hazard Information.

- **In case of fire** – Consult the country-specific Product Label and Safety Data Sheet for specific firefighting measures. Follow emergency procedures carefully. See Environmental, Health, and Physical Hazard Information.

Emergency response information – In the case of an emergency such as poisoning, product spillage, or fire associated with a Dow AgroSciences product please use the phone number listed on the Safety Data Sheet for the appropriate country.

In some countries, the Emergency Response number is also provided on the label on the package.

For more information, see the Product Label or Safety Data Sheet.

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Health Information

**Laboratory testing** – Flumetsulam has been evaluated by comprehensive regulatory guidelines and registered and approved for sale and use in the United States and other countries. These guidelines require laboratory testing for potential short-term (acute) and long-term (chronic) health effects. These tests help scientists determine how chemicals might affect humans, domestic animals, or wildlife in cases of overexposure. Pesticide products used according to label directions are unlikely to cause toxic effects. The amount of pesticide that people and pets may be exposed to is very low compared to those used in laboratory testing.

Health information for formulated flumetsulam products is summarized on country-specific Safety Data Sheets. It is important to note that health risks associated with individual products may vary based upon their formulation or intended use. Formulated products may contain solvents, minor components or additives that have additional health risks. These are a preferred source for specific health information as product formulations may contain components or additives with additional risks. For further details, also consult country-specific Product Label.

**Eye contact** – Contact may cause slight temporary eye irritation. Corneal injury is unlikely.

**Skin contact** – Prolonged contact is essentially nonirritating to skin.

**Inhalation** – Prolonged exposure is not expected to cause adverse effects. Based on the available data, respiratory irritation was not observed.

**Ingestion** – Very low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

**Repeated exposure** – In animals, effects have been reported in the kidneys. Flumetsulam did not cause cancer in laboratory testing.

**Developmental, reproductive and genetic information** - In laboratory testing, flumetsulam did not cause birth defects or other effects even at doses which caused toxic effects in the mother. In animal studies, this material did not interfere with reproduction. In vitro and animal genetic toxicity studies were negative.

For more information, see the Product Label or Safety Data Sheet.

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Environmental Information
Microbial degradation is the most important route of dissipation. Warm, moist soils with a pH between pH 5.9 and 7.8 will give the shortest half-life. Flumetsulam dissipation is most limited in cold, dry soils with a pH below 5.9. High organic matter soils will slow chemical release and break down. Flumetsulam is considered stable to sunlight.

Flumetsulam is very highly toxic to aquatic organisms on an acute basis. Flumetsulam is practically non-toxic to birds on an acute and a dietary basis.

For more information, see the Product Label or Safety Data Sheet.

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Physical Hazard Information
Flumetsulam is thermally stable at recommended temperatures and pressures. Exposure to elevated temperatures can cause product to decompose. Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: carbon monoxide, carbon dioxide, hydrogen fluoride and nitrogen oxides.

Consult the Product Label for specific use and storage information. Some products may be combustible because of the solvents used.

For more information, see the Product Label or Safety Data Sheet.

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Additional Information
- Safety Data Sheets and Product Labels http://www.cdms.net/manuf/mprod.asp?mp=11&lc=0&ms=3691&manuf=11
- Contact Us (http://www.dowagro.com/company/contact/index.htm)
- Flumetsulam- Active Ingredient Module, Dow AgroSciences, LLC (http://www.dowagro.com/en-us/usag/crop-portfolio)
- Flumetsulam Proposed Interim Registration Review Decision (http://www.regulations.gov/#!docketDetail;D=EPA-HQ-OPP-2008-0625)

For more business information about Flumetsulam, visit the Dow AgroSciences website at: http://www.dowagro.com/.

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References
1 Flumetsulam Technical Material Safety Data Sheet, Dow AgroSciences LLC
NOTICES

As part of its 2015 Sustainability Goals, Dow has committed to make publicly available safety assessments for its products globally. This product safety assessment is intended to give general information about the chemical (or categories of chemicals) addressed. It is not intended to provide an in-depth discussion of health and safety information. Additional information is available through the relevant Safety Data Sheet, which should be consulted before use of the chemical. This product safety assessment does not replace required communication documents such as the Safety Data Sheet.

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