

Nichino America, Inc.
Venue® Herbicide
Safety Data Sheet

1. IDENTIFICATION

Product Name: Venue Herbicide
General Use: Herbicide
Product Description: Suspension Concentrate
EPA Reg. No.: 71711-25

Manufacturer
Main Headquarters: Nihon Nohyaku Co., Ltd., Kyobashi OM Building, 19-8
Kyobashi 1-chome, Chuo-ku, Tokyo 104-8386 JAPAN

US Connection: Nichino America Inc.
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Emergency and Health and
Safety Inquiries: (800) 348-5832 (24-hours)
In case of fire or spills: (800) 424-9300 (24-hours)
In case of international shipments: (703) 527-3887 (24-hours)

2. HAZARD(S) IDENTIFICATION

Classified according to OSHA 29 CFR 1910.1200 HCS

Classification: None
Signal Word: None
Hazard Statements: None
Precautionary Statements: None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Percentage
Pyraflufen-ethyl	129630-19-9	2.0%

CAS Name: Acetic acid, [2-chloro-5-[4-chloro-5-(difluoromethoxy)-1-methyl-1 <i>H</i> -pyrazol-3-yl]-4-fluorophenoxy]-, ethyl ester		
Ethylene glycol	107-21-1	1 – 10%
*Other ingredients		88 - 97%

*Specific chemical identity and percentage of composition withheld as a trade secret

4. FIRST AID MEASURES

Skin Contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Most important symptoms and effects, both acute and delayed	Refer to Section 11 – Toxicology Information
Note to Physician	All treatments should be based on observed signs and symptoms of distress

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Water spray, foam, dry chemical, and carbon dioxide
Unsuitable extinguishing media:	No information available.
Special protective equipment and precautions for fire-fighters:	Firefighters and others who may be exposed should wear fully protective clothing and self-contained breathing apparatus. Due to the danger of acute toxicity to aquatic organisms, avoid permitting extinguishing media, such as water, foam, and dry chemicals, flow into ponds, rivers, and lakes.

Specific hazards arising from the chemical (e.g. nature of any hazardous combustion products)	Combustion or thermal decomposition will evolve toxic oxides of carbon and nitrogen (HCl, HF, CO ₂ , CO, NO _x).
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6. ACCIDENTAL RELEASE MEASURES

General and Disposal: Use proper protective equipment to minimize personal exposure (see Section 8). Take all necessary action to prevent and to remedy the effects of the spill. Ensure that the disposal is in compliance with federal or local disposal regulations (see Section 13). Notify the appropriate authorities immediately (see Section 15 for any applicable Reportable Quantity (RQ)). Report to authorities if water enters watercourse or sewer.

Land Spill or Leak:

Liquid spills on the floor or other impervious surfaces should be contained or diked and then absorbed with sawdust, sand, bentonite, or other absorbent clay. Collect contaminated absorbent, and place it in a properly labeled metal drum with lid. Thoroughly scrub the floor or other impervious surface with a strong industrial type detergent and rinse with water.

Liquid spills that soak into the ground should be dug up and placed in metal drums. When a large spill or leakage is found, wear protective clothing and respirator to avoid exposure.

Avoid contaminated absorbents or water flow into ponds, rivers, and lakes, due to the danger of acute toxicity to aquatic organisms.

7. HANDLING AND STORAGE

Notify the appropriate authorities immediately (see Section 15 for any applicable Reportable Quantity). Also report to authorities if contamination of waterways has occurred.

Handling Precautions:

- Harmful if absorbed through skin.
- Avoid contact with skin, eyes, or clothing. Wear long-sleeved shirt and
- long pants, socks, shoes, and chemical resistant gloves.
- Wash hands before eating, drinking, chewing gum, using tobacco, or

- using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Storage Precautions:

- Store in original container, and keep tightly closed when not in use.
- Store in a cool, dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

(Local exhaust): Ventilation may be necessary under certain confined conditions. If practical, use ventilation at the sources of air contamination. Control airborne contaminants below the exposure guidelines (see below for any applicable OSHA / ACGIH exposure limits).

Personal Protective Equipment (PPE):

Eye/Face Protection: Wear protective eyewear when there is significant potential for eye contact.

Skin Protection: Wear long-sleeved shirt and long pants, socks and shoes, and chemical-resistant gloves.

Respiratory Protection: Ensure good ventilation. Avoid breathing mist. If ventilation is inadequate, use approved respiratory protection equipment when airborne exposure limits are exceeded.

Exposure Limits:

<u>Ingredient:</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Ethylene glycol CAS 107-21-1	10 mg/m ³ (IFV) TWA	Not established

TWA = time-weighted average

IFV = inhalable fraction and vapor

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White "milky" liquid
Physical state:	Liquid
Odor:	Slight non-specific odor
Odor threshold	No information available
pH:	6.84 at 24°C (as a 1% w/w solution)
Melting point/freezing point	Data not available
Initial boiling point and boiling range	Data not available
Flash point	≥110°C
Evaporation rate	No data
Flammability (solid, gas)	Data not available
Upper/Lower flammability or explosive limits	Not explosive
Vapor pressure	1.04 x 10 ⁻⁶ Pa at 25°C (technical active ingredient)
Relative density	1.023 g/cm ³ at 20°C
Solubility(ies) in water	Data not available
Auto ignition temperature	None observed up to 110°C
Decomposition temperature	No data
Viscosity	Non-Newtonian: dependent on shear rate.

10. STABILITY AND REACTIVITY

Reactivity:	Non-reactive.
Chemical stability:	Stable under normal conditions
Possibility of hazardous reactions:	None known.
Conditions to avoid:	Combustion.
Incompatible materials:	None known.
Hazardous decomposition products:	Combustion or thermal decomposition will evolve toxic oxides of carbon and nitrogen (CO ₂ , CO, NO _x).

11. TOXICOLOGICAL INFORMATION

The following data were developed using Venue:

Acute Studies:

Oral LD₅₀ (rat):	Male: >5,000 mg/kg Female: >5,000 mg/kg
Dermal LD₅₀ (rat):	>2,000 mg/kg
Inhalation LC₅₀ (rat):	>5.53 mg/L (4 hrs)
Eye irritation (rabbit):	Slightly irritating
Skin irritation (rabbit):	Slightly irritating
Skin sensitization (guinea pig):	Non-sensitizing

The following data were developed using pyraflufen-ethyl technical:

Subchronic and Chronic Effects:

A 90-day rat feeding study was conducted at dose levels up to 15,000 ppm pyraflufen-ethyl. Liver and kidney effects were observed at the highest dose. The no observed effect level (NOEL) in this study was considered to be 1,000 ppm (~90 mg/kg body weight/day). In a 90-day oral toxicity study in dogs, pyraflufen-ethyl was administered at dose levels up to 1,000 mg/kg body weight/day. No effects in body weight or organ weight, clinical chemistry, hematology, histopathology, or gross pathology were observed. In long term studies, no effects were observed in dogs exposed for one year to a maximum dose of 1,000 mg/kg body weight/day. In a two year rat chronic study, liver and kidney effects were observed at 2,000 ppm. The NOEL was 400 ppm (~20mg/kg body weight/day).

Cancer Effects:

Pyraflufen ethyl was tested in lifetime studies in rats and mice. There was no evidence of carcinogenicity in the rat at doses as high as 10,000 ppm (~470 mg/kg body weight/day). In the mouse study, the incidence of hepatocellular adenomas was increased in mice receiving 5,000 ppm (~ 524 - 547 mg/kg body weight/day), a dose level considered to be in excess of a MTD (maximum tolerated dose). Based on the combined incidence of male mouse hepatocellular adenomas, carcinomas, and/or hepatoblastomas, the EPA has classified pyraflufen-ethyl as "Likely to be Carcinogenic to Humans". The EPA classification of pyraflufen-ethyl represents potential hazard without consideration of exposure information. The active ingredient pyraflufen-ethyl is not classified as a carcinogen by NTP, OSHA, or IARC.

Teratogenicity (Birth Defects):

There is no evidence of developmental toxicity.

Reproductive Effects:

There is no evidence of reproductive toxicity.

Neurotoxicity:

There is no evidence of neurotoxicity after oral exposure in acute or subchronic studies.

Immunotoxicity:

Suppression of the humoral immune response was measured in male rats exposed to 12,000 ppm of pyraflufen-ethyl (equivalent to ~ 943 mg/kg body weight/day) in a 28-day feeding study, the same dose at which systemic toxicity was evident. No humoral immune suppression was observed in female rats at any dose level.

Mutagenicity (Genetic Effects):

There is no evidence of mutagenicity nor genotoxicity.

Toxicity of other components:

Oral administration of ethylene glycol has been demonstrated to produce reproductive and developmental toxicity in experimental animals.

12. ECOLOGICAL INFORMATION

Ecological data were developed using pyraflufen-ethyl technical.

Environmental Precautions:

This product is toxic to fish and aquatic invertebrates. This product may contaminate water through drift of spray in wind or via runoff events. Use care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. Do not apply when weather conditions favor drift from treated areas.

13. DISPOSAL CONSIDERATIONS

General Disposal:

Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Any disposal practice must be in compliance with all federal, state/provincial, and local laws and regulations. State (provincial) and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Chemical additions, processing, storage or otherwise altering this material may make the waste disposal information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate. Waste characterization and disposal compliance are the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

Refer to appropriate federal (RCRA: 40 CFR.261), state/provincial, or local requirements for proper classification information. For regulatory information on the ingredient components, see Section 15.

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal:

Nonrefillable plastic container (Less than 5 gallons)

Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

DOT:	Not regulated.
IATA:	UN 3082, Environmentally hazardous substance, liquid, n.o.s., (pyraflufen-ethyl), Class 9, PG III.
IMDG:	UN 3082, Environmentally hazardous substance, liquid, n.o.s., (pyraflufen-ethyl), Class 9, PG III, Marine Pollutant, EmS: F-A, S-F

Venue Herbicide is not regulated for transport unless shipped by water or air.

15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION

Harmful if absorbed through skin.

U.S. Federal Regulatory Information:

EPA Registration Number: 71711-25

TSCA Inventory: Registered pesticide; exempt from TSCA

SARA Title III Notification and Information:

Section 302 (EHS) Ingredients:

Section 304 (EHS)

or CERCLA Ingredients (RQ):

Name	CAS #	Final Reportable Quantity
Ethylene glycol	107-21-1	5,000 lbs

Section 313 Ingredients: Ethylene glycol

U.S. State Regulatory Information:

U.S. State Right-to-Know (RTK) Ingredients:

Ethylene glycol
California Proposition 65 List:

- None

16. OTHER INFORMATION

HMIS® Hazard Rating:

Health: 1
Flammability: 0
Physical Hazard.: 0

NFPA Hazard Rating:

Health: 2
Flammability: 1
Instability: 0
Specific Hazard: None

Prepared by: Regulatory Affairs

Date: 12/19/18

Reason for Editing: Removed strike-through items, cleaned up formatting

Disclaimer of Expressed and Implied Warranties:

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with FIFRA label instructions.