

**NICHINO AMERICA, INC.**  
**MATERIAL SAFETY DATA SHEET**

**ARTISAN™ SE**

**13 May 2002**  
(supercedes 02/11/02)

**NICHINO AMERICA, INC.**

**Nichino America, Inc.****Artisan™ SE**

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**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Artisan SE  
**Chemical Name:** (active ingredients) **Flutolanil:** N-[3-(1-methylethoxy)phenyl]-2-(trifluoromethyl)benzamide  
**Propiconazole:** 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole  
**Chemical Formula:** C<sub>17</sub>H<sub>16</sub>F<sub>3</sub>NO<sub>2</sub> (flutolanil)  
CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub> (propiconazole)  
**EPA Registry Number:** 71711-17  
**MSDS Identification Code/Number:** 007  
**Synonyms:** Artisan SE  
**End-Use Product Description:** Artisan SE (suspo-emulsion) is a fungicide for use on peanuts.

**Manufacturer**  
**Main Headquarter:** Nihon Nohyaku Co., Ltd., 1-2-5,  
Nihonbashi, Chuo-ku, Tokyo 103, JAPAN  
Non-emergency information:  
Phone: 81-3-3278-0461  
Facsimile: 81-3-3281-2443  
Emergency information:  
Phone: 81-3-3281-1887

**US Connection:** Nichino America Inc.  
4550 New Linden Hill Road, Suite 501,  
Wilmington, Delaware 19808, USA  
Phone: 302-636-9001  
Facsimile: 302-636-9122

**Emergency and Health and Safety Inquiries: 1-800-348-5832 (24-hours).**  
**In case of fire or spills, information may be obtained by calling (800) 424-9300. In case of international shipments, call (703) 527-3887.**

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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient Name	Exposure Limits	Concentration % by Weight
Flutolanil CAS No.: 66332-96-5	OSHA-PEL: not established ACGIH-TLV: not established	32.0%
Propiconazole CAS No.: 60207-90-1	OSHA-PEL: not established ACGIH-TLV: not established	6.0%
Inert Ingredients, including:		
Surfactant		
Clay Granules	OSHA-PEL: 15 mg/m3 (total dust) ACGIH-TLV: 10 mg/m3 (total dust)	
Thickening Agent	OTHER: 15mg/m3 (total dust)	

**3. HAZARDS IDENTIFICATION**

\*\*\*\*\*EMERGENCY OVERVIEW\*\*\*\*\*

- ***Causes moderate eye irritation.***
- ***Toxic to fish.***
- ***The product is a light grey opaque liquid.***

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**Potential Health Effects:**

Primary route(s) of entry:	Skin contact
Eyes:	Causes moderate eye irritation.
Skin:	May be a slight skin irritant. Harmful if absorbed through the skin. Does not cause skin sensitization in animal studies.
Ingestion:	No specific health effects are known for ingestion of a small amount incidental to routine handling and use.
Inhalation:	No specific health effects are known.
Chronic (cancer information):	Flutolanil technical and propiconazole are not listed as carcinogenics by NTP, IARC, or OSHA. Propiconazole is considered by EPA as a possible human carcinogen (Group C).

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#### 4. FIRST AID MEASURES

- Inhalation:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
- Eye Contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- Skin/Clothing 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.
- Ingestion:** Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

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#### 5. FIRE FIGHTING MEASURES

- Flash Point:** Does not flash.
- Fire and Explosion Hazards:** Will burn to give off toxic oxides of carbon and nitrogen.
- Extinguishing Media:** Water, foam, carbon dioxide, or dry powder.
- Fire Fighting Instructions:** Wear positive pressure self-contained breathing apparatus. Spray containers with water to keep cool.

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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 metal drum. 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 self-breathing apparatus to avoid surplus contact.

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

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## 7. HANDLING AND STORAGE

<b>Handling Precautions:</b>	Avoid contact with skin, eyes, or clothing. Do not eat, drink, smoke, or chew gum or tobacco while handling this product and until hands and face are thoroughly washed with soap and water. Do not use the toilet before thoroughly washing hands. Remove contaminated clothing immediately and wash thoroughly before reuse. See "User Safety Recommendations" on the product label for additional details.
<b>Storage Precautions:</b>	Store in the original container. Store in a cool, dry place. Using label instructions, apply the entire contents of container to the target crop once container is opened. Protect from excessive heat.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls:</b>	Control airborne concentrations below the exposure guideline (see Section 2 for any applicable OSHA/ACGIH exposure limits). Local exhaust ventilation may be necessary under certain confined conditions.
<b>Eye/Face Protection:</b>	Safety glasses; chemical workers goggles.
<b>Skin Protection:</b>	PVC protective gloves recommended.
<b>Respiratory Protection:</b>	Ensure good ventilation. If not adequate, use a suitable dust mask or a dust respirator.
<b>Other/General Protection:</b>	<p>The following personal protective equipment (PPE) must be worn when using product or upon early entry into treated areas during the Restricted Entry Interval (REI):</p> <ul style="list-style-type: none"><li>• Long-sleeved shirts and long pants (must wear coveralls for early entry during REI)</li><li>• Waterproof gloves (must wear chemical-resistant gloves, such as barrier laminate or viton for early entry during REI)</li><li>• Shoes plus socks</li><li>• Protective eyewear (for early entry during REI only)</li></ul> <p><b>Note:</b> Refer to the product label for applicable details concerning the "User Safety Recommendations" and the use of PPE under the EPA Worker Protection Standards (40 CFR Part 170).</p>

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Light grey, opaque
<b>Odor:</b>	Paint and musty.
<b>Basic Physical Properties:</b>	
Physical State:	Liquid
Boiling Point:	Not available
Melting point*:	Not applicable
Vapor Pressure:	Flutolanil: 1.33 x 10(-5) mm Hg (20°C) Propiconazole: 1.30E-04 Pa @ 20°C
Density:	1.147 g/ml (20°C)
Viscosity:	Centistokes 86.546 (20°C) Centipoises 99.268 (20°C)

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**10. STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable under standard conditions
<b>Conditions to Avoid (Stability):</b>	None known
<b>Hazardous Polymerization:</b>	Will not occur

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**11. TOXICOLOGICAL INFORMATION**

*The following data were developed using Artisan SE:*

**Acute Studies:**

Oral LD <sub>50</sub> (rat):	> 5,000 mg/kg (practically non-toxic)
Dermal LD <sub>50</sub> (rat):	> 5,000 mg/kg (practically non-toxic)
Inhalation LC <sub>50</sub> (rat):	>2.04 mg/L (practically non-toxic)
Eye irritation (rabbit):	Mildly irritating (Maximum Mean Total Score (MMTS): 6.3/110)
Skin irritation (rabbit):	Slightly irritating (primary irritation index: 1.2)
Skin sensitization (guinea pig):	Nonsensitizing

**Subchronic (Target Organ Effects):**

Results from 90-day animal studies suggest no target organ effects under the conditions of normal handling and use.

**Chronic (Cancer Information):**

Flutolanil:	In 2-year feeding studies with flutolanil in rats, no organotoxic effects were observed at dose levels up to 200 ppm. At very high experimental dose levels (2,000–10,000 ppm), slight anemia, minor liver damage, and some nephrosis were observed. However, flutolanil had no significant effect on mortality and was not carcinogenic at any of the doses tested. Similar results were seen in dogs administered up to 1250 mg/kg/day.
Propiconazole:	Lifetime feeding studies in mice and rats produced an increased incidence of liver tumors in male mice at an excessively toxic dose level (2,500 ppm; the highest dose tested), but not in female mice or rats.

**Carcinogenicity:**     NTP: No     IARC: No     OSHA: No

**Teratogenicity (Birth Defects):**

Flutolanil:     Flutolanil technical demonstrated no teratogenic effects in rabbits at oral dose levels up to 1000 mg/kg/day.

Propiconazole: In a lifetime feeding study, propiconazole was not teratogenic in rats. In a rabbit study, the no observed effect level (NOEL) was determined as 400 mg/kg (the highest dose tested).

**Reproductive Effects:**

Flutolanil:     Flutolanil technical showed no adverse effects on reproduction in a 3-generation rat reproduction study at dietary doses up to 10,000 ppm.

Propiconazole: In a two-generation feeding study, propiconazole did not affect reproductive capabilities in rats, but there was some reduction in offspring survival at 125mg/kg/day.

**Neurotoxicity:**

Data not available.

**Mutagenicity (Genetic Effects):**

Flutolanil:     Flutolanil technical was not mutagenic or genotoxic when tested in the Ames gene mutation assay, the mouse micronucleus test, or the chromosomal aberration assay.

Propiconazole: Propiconazole showed no genotoxic potential in numerous mutagenicity studies.

**Hazard:** Propiconazole is not classified as a teratogen, mutagen, or reproductive inhibitor. However, based upon the incidence of liver tumors in treated male mice, the EPA has classified propiconazole as a possible human carcinogen (Group C).

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## 12. ECOLOGICAL INFORMATION

**Environmental Precautions:**

This product is toxic to fish. For terrestrial uses, do not apply to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

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**13. DISPOSAL CONSIDERATION**

**General Disposal Guidance:** 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. Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used 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 in proper disposal methods.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, 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.

**RCRA Information:**  
RCRA Hazardous Waste Ingredients: None

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**14. TRANSPORT INFORMATION**

**Proper Shipping Name:** None  
**Dot Shipping Label:** None

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**15. REGULATORY INFORMATION****U.S. Federal Regulatory Information:**

EPA Registration Number: 71711-17  
 TSCA Inventory: Registered pesticide; exempt from TSCA.

**SARA Title III Notification and Information:**

Section 302 (EHS) Ingredients: None  
 Section 304 (CERCLA & EHS) Ingredients (RQ): None  
 Section 313 Ingredients: Propiconazole  
 (CAS No.60207-90-1)

Section 311/312 Notifications and Information:

**Hazard Classes:**

Acute Health Hazard: No  
 Chronic Health Hazard: Yes  
 Fire Hazard: No  
 Sudden Release of Pressure Hazard: No  
 Reactivity Hazard: No

**U.S. State Regulatory Information:**

U.S. State Right-to-Know (RTK) Ingredients: none

**Canadian Regulatory Information:**

CPC Number: None  
 The MSDS contains all CPR required hazard-related information.

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**16. OTHER INFORMATION**

**HMIS Hazard Rating:** Health:  
 Fire:  
 Reactivity:  
 PPE:

**NFPA Hazard Rating:** Health: 2 Moderate  
 Fire: 1 Slight  
 Reactivity: 0 Negligible  
 Spec. Haz.: None

**MSDS Identification Code/Number:** 007

**Prepared By:** Dept. of Regulatory Affairs

**Phone:** 302-636-9001

**Date of Printing:** 13 May 2002

**MSDS Revision 1:** Updated to include registration status and to include  
 EPA Registration Number

**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 label instructions.