

**NFPA Rating**

**HMIS Rating**

Health	Flammability	Reactivity	Special	Health	Flammability	Reactivity	Personal Protection
1	0	0	None	1	0	0	A

**Material Safety Data Sheet** This MSDS complies with OSHA's Hazard Comm. Standard 29 CFR 1910.1200 and OSHA Form 174

**DOT Hazard Classification \***  
Consumer commodity, ORM-D

**Manufactured For:**  
Hillyard Industries, Inc.

**Identity (Trade Name)**  
#451, Dual Action

**Address:**  
P.O. Box 909

**MSDS Number \***  
451-97-1

St. Joseph, MO 64502

**Date Prepared:**  
June 23, 2000

**Telephone (Information)**  
(816) 233-1321 (Ext. 2303)

**Prepared By:**  
Regulatory Dept.

**Telephone (Emergency)**  
CHEMTREC  
(1-800-424-9300)

NOTE: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

**SECTION II - MATERIAL IDENTIFICATION AND INFORMATION**

COMPONENTS - Chemical Name & Common Names	CAS Number	Regulatory Reference **	Approx. wt %	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Reference Source***
Isobutane	75-28-5	f,g,i	20-30	800	800	d
Propane	74-98-6	d,e,f,g,i,j	5-15	800	800	d
d-trans Allethrin	584-79-2	d,e,f,g,i,j	0.25	800	800	d
Permethrin	52465-53-1	d,e,f,g,i,j	0.15	800	800	d
Non-regulated compounds	Mixture	None	60-80	None	None	d

**SECTION III Physical/Chemical Characteristics**

<b>Boiling Point</b> Concentrate	212° F	<b>Specific Gravity (H<sub>2</sub>O = 1)</b> Concentrate	1.00
<b>Pressure (psig. @ 70° F)</b>	70 ± 5	<b>Melting Point</b>	No Data
<b>Vapor Density (AIR = 1)</b>	Greater than one (1)	<b>Evaporation Rate (Butyl Acetate = 1)</b>	No Data
<b>Solubility in Water</b> Complete		<b>pH</b>	8 ± 0.5

**Appearance and Odor**

Pale milky white liquid with a cherry blossom scent in an aerosol can.

**SECTION IV - Fire and Explosion Hazard Data**

<b>USA Flame Projection Test</b> 0" - Nonflammable	<b>Flammable Limits</b> No Data	<b>LEL</b> No Data	<b>UEL</b> No Data
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**Extinguishing Media -**

Not usually necessary as this product does not readily support combustion.

**Special Fire Fighting Procedures -**

Use water spray to keep containers cool and vapors down. Do not allow runoff to enter sewers or public watercourses. Wear self-contained breathing apparatus in chemical fires.

**Unusual Fire and Explosion Hazards -**

Aerosol container (pressurized) may burst if heated over 130° F.

\* Optional \*\* Regulated by :

a. CA	f. MA	k. Calif. Prop. 65
b. CT	g. NJ	l. Title III, Sec. 313
c. FL	h. NY	m. Other _____
d. IL	i. PA	

\*\*\* Chemical listed as Carcinogen or Potential Carcinogen

a. NTP
b. IARC Monographs
c. OSHA
d. Not listed

e. LA	j. RI	
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e. Animal data only
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**SECTION V - Reactivity Data**

Stability	Unstable		Conditions to Avoid - Extreme heat, direct sunlight and sources of ignition.
	Stable	X	
Incompatibility (Materials to Avoid) - Strong oxidizing agents such as chlorine, permanganates, and dichromates.			
Hazardous Decomposition or Byproducts - Oxides of carbon, smoke and soot.			
Hazardous Polymerization	May Occur		Conditions to Avoid - Contact with sparks, open flame or any source of ignition.
	Will Not Occur	X	

**SECTION VI - Health Hazard Data**

Route(s) of Entry -	Eyes? Yes	Inhalation? Yes	Skin? Yes	Ingestion? Yes
Health Hazards (Acute and Chronic) - Caution. May cause eye and skin irritation. Harmful if absorbed through skin. Harmful if swallowed. Prolonged and repeated inhalation of concentrated vapors may cause headache, nausea and central nervous system effects. Follow good chemical hygiene practices to avoid these hazards.				
Carcinogenicity: None known	NTP? No	IARC Monographs? No	OSHA Regulated? No	
Signs and Symptoms of Exposure - Redness, burning and tearing of eyes. Redness, drying and cracking of skin. High concentrations may cause disorientation and lack of coordination.				
Medical Conditions Generally Aggravated by Exposure - Pre-existing skin and respiratory tract disorders may be aggravated if this product is improperly used.				
Emergency and First Aid Procedures: <b>EYES</b> - Flush with plenty of water for at least 15 minutes lifting eyelids to insure complete removal. See a physician immediately. <b>INGESTION</b> - Do not induce vomiting. Possible pulmonary damages if aspirated. Contact a physician or poison control center immediately. <b>INHALATION</b> - Get to fresh air. If not breathing, qualified personnel should administer artificial respiration. <b>SKIN</b> - Flush with plenty of water. If irritation arises and persists consult a physician.				

**SECTION VII - Precautions for Safe Handling and Use**

Steps to be Taken in Case Material is Released or Spilled - Isolate traffic and ventilate area. Eliminate all ignition sources. Wear protective gear as necessary. Dike to prevent spread. Pick up on absorbent material and put in suitable container for proper disposal. This pesticide is extremely toxic to fish and other aquatic organisms.	
Waste Disposal Method - Consult local, state and federal regulations. Do not puncture or incinerate container. Replace cap and wrap container in several layers of newspaper. Discard in trash. Do not contaminate water when disposing of wastes.	
Precautions to be Taken in Handling and Storing - Contents under pressure. Do not use or store near heat or open flame. Exposure to temperatures above 130° F (54.5° C) may cause bursting. Avoid contact with eyes, skin and clothing. Direct spray away from face. Replace cap when not in use. Keep in locked storage area. Do not swallow. Wash thoroughly after handling. Avoid inhaling mist or vapors. Use with adequate ventilation.	
Other Precautions - Follow label directions carefully. Keep out of reach of children. Do not deliberately concentrate and inhale vapors. Do not apply directly to water. Do not contaminate water when disposing of wastes. Do not use on surfaces that can be harmed or stained by water. Do not apply this product in conduits, motor housings, junction and switch boxes or other electrical equipment because of possible shock hazard. Store in a dry location away from heat and direct sunlight. Do not store this water-based product at temperatures below 32° F.	

**SECTION VIII - Control Measures**

Respiratory Protection (Specify Type) - Not usually necessary. Use with adequate ventilation. If PELs or TLVs are exceeded (see Section II), use an approved NIOSH/MSHA respirator.			
Ventilation	Local Exhaust - Not necessary	Special - None	
	Mechanical (General) - Yes	Other - None	
Protective Gloves Impervious	Eye Protection - Safety glasses or goggles (ANSI Z87)		
Other Protective Clothing or Equipment Only if direct contact is possible (i.e. apron, boots, etc.)			
Work/Hygienic Practices Normal. Wash thoroughly before eating, drinking, smoking, using restrooms, etc. Wash contaminated clothing before reuse.			

**DISCLAIMER OF WARRANTIES**

**NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.**

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