

Source Dynamics

Material Safety Data Sheet

Paraquat Concentrate

Revision Date: 12/03/2007

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SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: Paraquat Concentrate

EPA Registration No. 82542-3

Source Dynamics, LLC
10039 E. Troon North Drive
Scottsdale, Arizona 85262
USA

FOR MEDICAL EMERGENCIES, CONTACT the National Poison Information Center 1-800-858-7378

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Paraquat Dichloride	1910-42-5	43.2

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview DANGER-POISON. May be fatal if swallowed. Fatal if inhaled. Do not breathe spray mist. Wear dust/mist respirator as specified in the PPE section of this label. Causes irreversible eye damage. Wear protective eyewear. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

Important Inhalation is an unlikely route of exposure due to low vapor pressure and large spray droplet size, but mucosal irritation and nosebleeds may occur. Prolonged contact with this concentrated product can irritate your skin.

Physical Properties Appearance: Dark brown liquid
Odor: Strong pungent odor

Hazardous Decomposition Products

Carbon dioxide, carbon monoxide, chlorine, hydrogen chloride, possible trace amounts of phosgene, nitrogen oxides, ammonia and other toxic and noxious fumes.

Physical and Chemical Hazards

This product is mildly corrosive to aluminum and produces hydrogen gas, which may form a highly combustible gas mixture. Do not mix or store in containers, spray tanks, mix tanks, nurse tanks or such systems made of aluminum or having aluminum fittings. This product is compatible with high density polyethylene and rubber lined steel containers.

Medical Conditions Aggravated by Exposure

No specific conditions are known which may be aggravated by exposure to this product.

SECTION 4. FIRST AID MEASURES

General	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	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.
Skin	Call a physician or poison control center immediately. Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes.
Ingestion	Call a physician or poison control center immediately. SPEED IS ESSENTIAL. Immediate medical attention is required. If available, give an adsorbent such as activated charcoal, bentonite or Fuller's earth. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Do not leave victim unattended.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance. Call a physician or poison control center immediately. The odor of this product is from the stanching agent, which has been added, not from the Paraquat.

Note to Physician

Administer either activated charcoal (100 g for adults or 2g/kg body weight for children) or Fuller's earth (15% solution; 1 Liter for adults, 15mL/kg body weight for children). NOTE: The use of gastric lavage without administration of an adsorbent has not shown any clinical benefit. Do not use supplemental oxygen. Eye splashes from concentrated material should be treated by an eye specialist after initial treatment. With the possibility of late onset corneal ulceration, it is advised that patients with paraquat eye injuries are reviewed by an eye specialist the day after first presentation. Use treatment that is appropriate for chemical burns. Intact skin is an effective barrier to paraquat, however contact with irritated or cut skin or repeated contact with intact skin may result in poisoning.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	> 100 °C
Autoignition Temperature	> 625 °C
Suitable Extinguishing Media	Carbon dioxide (CO2), Dry chemical, Foam
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Evacuate personnel to safe areas. Cool closed containers/ tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Unusual Fire, Exposure and Reactivity Hazards	During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
Hazardous Decomposition Products	Carbon dioxide, carbon monoxide, chlorine, hydrogen chloride, possible trace amounts of phosgene, nitrogen oxides, ammonia and other toxic and noxious fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. Remove all sources of ignition. Wear suitable protective clothing.
Methods for Cleaning Up	Control the spill at the source. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Collect and transfer the product into a properly labeled and tightly closed container. Clean contaminated floors and objects thoroughly with detergent (e.g. Tide, Spic and Span, etc.), observing environmental regulations. Contaminated soil may have to be removed and disposed.
Additional Advice	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact vegetation. Untreated spilled material can dry to a highly irritating dust.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
Storing Procedures	Store in a cool, dry and well ventilated place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed and out of direct sunlight. Store in original container and out of the reach of children, preferably in a locked storage area.
Work/Hygienic Procedures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation	Control exposure levels through the use of general and local exhaust ventilation.
Respiratory Protection	Wear a NIOSH-approved organic vapor respirator with particulate prefilter.
Personal Protective Equipment (PPE)	
Eye Protection	Use splash-proof goggles if needed to prevent liquid from getting into the eyes.
Clothing Protection	Laundry clothing after use. Wash thoroughly after handling.
Skin Protection	Wear long sleeves and trousers to prevent skin contact, and chemical resistant gloves such as nitrile or butyl rubber.
Other Protective Measures	Clean water should be available for washing in case of eye or skin contamination. Educate and train employees in safe use of the product. Follow all label instructions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Dark brown liquid
Physical State	liquid
Odor	Strong pungent odor
pH	4 - 6 (100 %)
Specific Gravity	1.15 at 20 °C
Water solubility	miscible
Flammability	> 100 C

SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid	Extremes of temperature and direct sunlight. Freezing. 10% Potassium permanganate solution and iron powder.
Hazardous Decomposition Products	Carbon dioxide, carbon monoxide, chlorine, hydrogen chloride, possible trace amounts of phosgene, nitrogen oxides, ammonia and other toxic and noxious fumes.
Hazardous Reactions	Stable under normal conditions. Material is not known to polymerize.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the technical-grade active ingredient, tebuconazole.

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Acute Oral Toxicity	Rat: LD50: 283 mg/kg (female)
Acute Dermal Toxicity	Rat: LD50: > 2,000 mg/kg
Acute Inhalation Toxicity	Rat: LC50: 0.0006 mg/l Exposure time: 4 h
Skin Irritation	Rabbit: Slight irritation.
Eye Irritation	Rabbit: Moderately irritating.
Sensitization	Not a contact sensitizer.
Chronic Toxicity	Rodent studies showed signs of irritation in 21 day dermal studies. In a 2.5 year chronic study, rats showed evidence of cataracts, body weight reduction and lung effects (alveolar macrophage infiltration) at 75ppm and above. A 90 day dog diet study showed evidence of lung effects leading to alveolar collapse and death at 3 mg/kg/day. Chronic pneumonitis was seen in a 1 year dog study at 0.93 mg/kg/day and above.
Assessment Carcinogenicity	No evidence in rat or mouse.
Reproductive Toxicity	A three generation reproductive study showed no evidence of fertility or reproductive effects at doses below that causing maternal toxicity. Reproductive NOEL was above 7.5 mg/kg/day, the highest dose level.
Target Organs	Lungs, Kidneys

SECTION 12. ECOLOGICAL INFORMATION

Environmental

This product is toxic to wildlife. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Apply this product as specified on the label.

Paraquat dichloride, the active ingredient in the product, is toxic to non-target plants and crops if off-target movement occurs because it desiccates all green plant tissue. Extreme care must be taken to ensure that off-target drift is minimized to the greatest extent possible. Refer to the local and state laws, regulations, guidelines and spray drift information contained in the "Directions for Use" section of the product labeling for proper application to avoid off-target movement. Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption. Do not apply when weather conditions favor drift from treated areas. To avoid drift, do not make aerial applications during periods of thermal inversion.

SECTION 13. DISPOSAL CONSIDERATIONS

**General Disposal
Guidance**

Do not contaminate water, food, or feed by disposal. Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:

Corrosive liquids, toxic, n.o.s. (Paraquat dichloride 43.2%), 8 (6.1), UN 2922, PG III

B/L Freight Classification: Item: 45617 [Fungicides, Herbicides, Insecticides or Rodenticides], Class 92.5

SECTION 15. REGULATORY INFORMATION

EPA Registration No.

US Federal Regulations

TSCA list

Exempt

SARA Title III - Section 302/304 – Paraquat dichloride: RQ=10 lbs (2.4 gallons)

SARA Title III - Section 311/312 – Acute Health Hazard

Chronic Health Hazard

SARA Title III – Section 313 chemicals – Paraquat dichloride (43.2%) CAS # 1910-42-5Toxic

US States Regulatory Reporting

CA Prop65 – Not applicable

CERCLA Reportable Quantity – Not applicable.

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 4 Flammability - 0 Reactivity - 0 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

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