

2K7® Water Soluble Pak

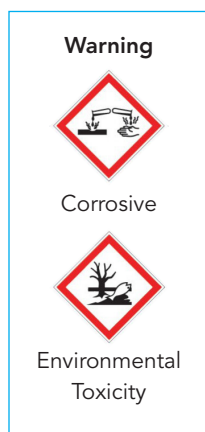
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1- Product and Company Identification

GHS Product Identifier	2K7® Water Soluble Pak
Recommended Use	Biocide - Product registered in both the US (EPA) and Canada (PMRA). Please follow all directions on label and see Section 15 for explanation on differences for EPA/FIFRA AND GHS
Company Name	OSP #6, 820 28 Street N.E. Calgary, Alberta Canada T2A 6R3
Phone Number	(403) 291-1658
Emergency 24 Hr. Availability	U.S.A. Chem Tel - (800) 255-3924 Canada CANUTEC - (613) 996-6666 or *666 on cellular phone



2- Hazard Identification



This product is a substance.

This product is packaged in a water soluble package to reduce possible contact with the biocide. Hazards are identified for the active ingredient in the pack.

Signal Word (See Section 15)

Scale 1 to 4 - 1 most serious, 4 least serious		
Acute Tox.	4	Harmful in contact with skin
Acute Tox.	4	Harmful if swallowed (See Section 15)
Skin Irritation	2	Causes skin irritation
Eye Damage	1	Risk of serious eye damage
Aquatic Acute	1	Very toxic to aquatic life
STOT SE	3	May cause respiratory irritation (Specific Target Organ Toxicity - Single Exposure)

3- Composition

CAS Number	Name	Content (% W/W)
52-51-7	2-Bromo-2-nitropropane-1,3-diol (BNPD)	80 - 100%

4- First Aid Measures

This product is a solid in a water soluble package; proper usage will minimize the contact hazards. If there is exposure to chemical or treated fluid then proceed in the following manner.

Eye Contact	Immediately irrigate with water for at least 15-20 minutes, remove contact lenses after the first 5 minutes and obtain medical attention.
Skin Contact	Remove contaminated clothing (wash clothing before reuse). Rinse (15-20 minutes), wash affected skin with water or soap and water. If irritation develops, obtain medical attention.
Ingestion	If swallowed, wash out mouth thoroughly with water; can sip water to drink. Do not induce vomiting unless advised to do so by medical staff. Obtain medical attention.
Inhalation	Move person to fresh air. If issues arise, call 911, give artificial respiration. Obtain medical attention.

5- Fire Fighting Measures

Flash Point	Not applicable
Flammability	Not highly flammable
Auto-Ignition	Not self-igniting
Extinguishing	Noncombustible
Explosion Hazard	None

Fire fighting procedures: Use dry powder or alcohol resistant foam, water spray or carbon dioxide for extinguishing media. Harmful vapors may be released during fire-fighting operations, wear self-contained breathing apparatus.

Note: Stable at normal temperatures, but when heated above 140°C the solid decomposes exothermically liberating toxic hydrogen bromide and oxides of nitrogen, and swells up to give a sticky, tarry mass which burns readily in a fire. The decomposition temperature is significantly lowered in the presence of inorganic or organic bases to an extent proportional to the amount of base present.

6- Accidental Release Measures

Isolate area. Wear prescribed protective clothing and equipment. Shovel or sweep waste into an approved container; if appropriate moisten to prevent dusting and dispose of following local, state and federal regulations. Clean the area with detergent and water. Protect the environment, this is a biocide; prevent the chemical or rinse fluids from entering soil, ditches, natural waterways. Follow label instructions on the containers.

7- Handling and Storage

Handling: Use proper PPE (see Section 8) Work in well-ventilated area. Avoid open packaging. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Storage: Keep container tightly closed when not in use. Store in cool location and away from all foods and animal feeds. Avoid all sources of ignition: heat, sparks and open flame.

Follow all instructions on the label; this is a registered biocide both in Canada and the US.

USA - It is a violation of federal law to use this product in a manner inconsistent with its labelling.

CANADA - This pest control product is to be used only in accordance with the directions on the label. It is an offence under Pest Control Products Act to use this product in a way that is inconsistent with the direction on the label. The user assumes the risk to persons or property that arises from any such use of this product.

8- Exposure and Controls / Personal Protection

Respiratory Protection	None required for normal use conditions, product is in a water soluble pack to eliminate dust problems (see Section 15 - FIFRA)
Protective Gloves	Chemical resistant gloves
Eye Protection	Safety eye wear (Face shield, glasses or goggles)
Other Protective Equipment	Chemical-resistant clothing to prevent prolonged skin contact.

Wash thoroughly with soap and water after handling. Discard clothing or other absorbent material that may have been heavily contaminated with the product's concentrate. Remove lightly contaminated clothing and wash separately from other laundry using detergent and hot water before re-use.

9- Physical and Chemical Properties

Appearance	White crystalline
Odor	Odorless
Odor Threshold	No data available
pH	<7 in 1% sol. @ 20°C
Melting Point	128-132°C
Boiling Point	Not applicable
Flash Point	Not applicable
Specific Gravity	1.1 kg/l
Upper/Lower explosive limits	No data available

Vapor Pressure	1.26x10 ⁻⁵ mg Hg @ 20°C
Vapor Density	Not determined
Auto-ignition Temp	No data available
Viscosity	Not applicable
Solubility in Water	28% (m/v) @23°C fresh water
Decomposition Temp	140°C
Evaporation Rate	Not applicable
Flammability	No
Partition Coefficient n-octanol/water (log Kow)	-0.64

10- Stability and Reactivity

Reactivity	Will react with oxidizing materials.
Conditions to avoid	Avoid all sources of ignition, heat sparks and open flame.
Stability	Stable under normal conditions and recommended use.
Hazardous reactions	Avoid maximum temperature of 90°C to prevent self-heating and rapid decomposition. May violently decompose at 140°C.
Incompatible materials	Avoid contact with bases, amines and oxidizing material. Corrosive to some metals.
Hazardous decomposition products	Nitrogen oxides, bromine compounds.

11- Toxicological Information

Acute Toxicity		
Oral Type of Value: LD50 Species: Rat (male/female) Value: 305 mg/kg (OECD 401) Data refer to diluted aqueous solution of substance	Inhalation Type of Value: LC50 Species: Rat (male/female) Value: ≥ 0.588 mg/l Exposure Time: 4 hours An aerosol was tested	Dermal Type of Value: LD50 Species: Rat (male/female) Value: >2,000 mg/kg (OECD 402) Aqueous solution was tested The European Union (EU) has classified this substance as 'harmful'

Irritation / Skin Corrosion		
Skin Species: Rabbit Result: Severely irritating Method: OECD 404	Eye Species: Rabbit Result: Irritant Method: Draize test The EU has classified this Substance with 'Risk of Serious damage to eyes'	Sensitization Species: Guinea pig Result: Non-sensitizing Method: Guinea Pig Maximization Test Similar to OECD 406

Experience in humans:

If this substance comes into contact with the skin of hypersensitive persons, sensitization might occur. The whole of the information assessable provides no indication of a carcinogenic, reproductive or teratogenic effect.

STOT SE (Specific Target Organ Toxicity - Single Exposure) 3: May cause respiratory irritation (Scale 1 to 4 - 1 most serious, 4 least serious)

12- Ecological Information

Toxicity Data		
Fish Acute: <i>Oncorhynchus mykiss</i> / LC50 (96 hours): 41.2 mg/l Chronic: <i>Oncorhynchus mykiss</i> / LC50 (49 days): 39.1 mg/l Nominal concentration (OECD 210 Flow through) Aquatic Plants Toxicity: EC50 (72 hours): 0.4 – 2.8 mg/l	Aquatic Invertebrates Acute: EC50 (48 hours): 1.4 mg/l Chronic: <i>Daphnia magna</i> / NOEC (21 days): 0.27 mg/l (OECD 211 Flow through). The statement of the toxic effect relates to the analytically determined concentration. Microorganisms Toxicity: Activated sludge/ EC20 (150 minutes): 2 mg/l nominal concentration (OECD 209 Aquatic) Other Terrestrial Non-mammals Bobwhite Quail Toxicity: LC50 (5 days): 4,488 ppm	Soil Living Organisms <i>Eisenia foetida</i> Toxicity: LC50 (14 days): >500 mg/g (OECD 207 artificial soil) The details of the toxic effect relate to the nominal concentration. Other Soil Dwelling Microorganisms Toxicity: EC (28 days): 25 mg/kg (OECD 216) The details of the toxic effect relate to the nominal concentration.

Degradability / Persistence		
Biological/Abiological Degradation Test method: OECD 302B; ISO 9888; 88/302/EEC, part C Method of analysis: DOC reduction Degree of elimination: 50% Evaluation: Moderately/partially eliminated from water. The product can be degraded abiotically, e.g. chemical or photolytic processes		
Bioaccumulative potential	Environmental mobility	Other adverse effects
Canadian DSL: Bioaccumulative: No	Transport between environmental compartments: Adsorption/water – soil KOC: 5	Do not allow substance to enter soil, waterways or waste water channels.

FIFRA - This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with proper permitting, see product label.


13- Disposal Considerations

Waste disposal of substance: Must be disposed of or incinerated in accordance with local regulations.



Container disposal: The packaging must not be re-used. **Follow guidelines on label.**

FIFRA - Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a NPDES permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. Do not contaminate water by cleaning of equipment or disposal of waste.

14- Transport Information – Land, Sea or Air

DOT (USA) / TDG (Canada)		
	Shipping Name	2-Bromo-2-nitropropane-1,3-diol
	Hazard Class	4.1, EHSM "Flammable Solid"
	ID Number	UN 3241
	Packing Group	III
	U.S.DOT Reportable Quantity	Up to 500 kg "Limited Quantity" Over 500 kg Class 4.1
	TDG Limited Quantity	Up to 5 kg "Limited Quantity Index"
	Marine Pollutant	Yes

15- Regulatory Information

TSCA, US	Released/exempt	
OSHA Hazard category	Acute target organ effects reported, skin and/or eye irritant, Toxic – oral	
SARA Hazard categories (EPCRA 311/312)	Acute, Chronic	
Canadian DSL Inventory	<ul style="list-style-type: none"> All components are listed 	
WHMIS	This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.	
Classification	B4 Flammable Solid 	D1B Materials Causing Immediate and Serious Toxic Effects – Toxic Material 
FIFRA	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.	

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

DANGER Corrosive. Causes irreversible eye damage and skin burns. May be fatal if swallowed or inhaled. Harmful if absorbed through the skin. Do not get in eyes, on skin or on clothing. Do not breathe dust. For handling activities, use dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P, or HE pre-filter. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

16- Other Information

GHS compliant Version 3 completed January 18, 2016.

PPE = Personal Protection Equipment	OECD = Organization for Economic Cooperation and Development
LD = Lethal Dose	EU = European Union
LC50 = Lethal concentration - affects 50% of the population	EEC = European Economic Community
EC20 = Effective concentration - affects 20% of the population	DSL = Domestic Substance List (Canada)
EC50 = Effective concentration - affects 50% of the population	WHMIS = Workplace Hazardous Materials Information System
DOC = Dissolved organic carbon	OSHA = Occupational Safety and Health Administration
KOC = Soil organic carbon–water partitioning coefficient	TSCA = Toxic Substances Control Act
NOEC = No observed effect concentration	SARA = Superfund Amendments and Reauthorization Act
FIFRA = Federal Insecticide, Fungicide, Rodenticide Act	EPCRA = Emergency Planning and Community Right-to-Know Act

This product's health and safety information is provided to assist our customers in assessing compliance with Health, Safety and Environmental regulations. The information contained herein is based on data available to us, and is believed to be accurate, although no guarantee or warranty is provided or implied by the company in this respect. Since the use of this product is within the exclusive control of the user, it is the user's responsibility to determine the conditions which include but are not limited to the safe use, storage, disposal, and transportation. Such conditions must comply with all governmental regulations.

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