



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US OSHA HCS 2024

Issuing Date 06-Dec-2024

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Revision Number 2

## 1. Identification

### Product identifier

**Product Name** FROG Phosphate Remover 4Pro

### Other means of identification

**UN number or ID number** UN1759

**Synonyms** Phosphate Remover

### Recommended use of the chemical and restrictions on use

**Recommended use** Residential swimming pools

**Restrictions on use** Consumer use  
Use only for intended applications

### Details of the supplier of the safety data sheet

#### Manufacturer Address

King Technology, Inc.  
6000 Clearwater Dr.  
Minnetonka, MN 55343  
+1 (952) 933-6118

**E-mail** sdsinfo@kingtechnology.com

#### Emergency telephone number

**Emergency telephone** CHEMTREC Emergency Tel. #: 1-800-424-9300 (Canada and USA)

## 2. Hazard(s) identification

### Classification of the substance or mixture

Corrosive to metals	Category 1
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1

### Hazards not otherwise classified (HNOC)

Not applicable.

### Label elements

**Danger**

**Hazard statements**

May be corrosive to metals.  
Causes serious eye damage.  
May cause an allergic skin reaction.

**Precautionary Statements - Prevention**

Avoid breathing dust, fume, gas, mist, vapors and spray.  
Contaminated work clothing must not be allowed out of the workplace.  
Keep only in original packaging.  
Wear protective gloves.

**Precautionary Statements - Response**

Get medical advice/attention if you feel unwell.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER or doctor.  
IF ON SKIN: Wash with plenty of water and soap.  
If skin irritation or rash occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
Absorb spillage to prevent material damage.

**Precautionary Statements - Storage**

Store in corrosion resistant container with a resistant inner liner.

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

**Other information**

Toxic to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

**Substance**

Chemical name	CAS No.	Weight-%	Trade secret
Lanthanum trichloride heptahydrate	10025-84-0	90-100	*

This product may have exposure limits or other information identified as the following: Particulates not otherwise classified (PNOC).

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. First-aid measures

**Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give

oxygen. Get medical attention immediately if symptoms occur.

<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

#### **Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	May cause blindness. May cause redness and tearing of the eyes. Burning. Rashes. Itching. Hives. Redness. Stomach pain. Coughing and/ or wheezing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
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<b>Effects of Exposure</b>	None known.
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#### **Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	May cause sensitization in susceptible persons. Treat symptomatically.
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## **5. Fire-fighting measures**

<b>Suitable Extinguishing Media</b>	Fog, Use water spray to cool fire-exposed containers.
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<b>Unsuitable extinguishing media</b>	No information available.
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<b>Specific hazards arising from the chemical</b>	May cause sensitization by skin contact. Hydrogen may be formed by contact with acids, bases and moisture. Vapors may accumulate in a confined space and create a flammable atmosphere. Be aware of danger of explosion.
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#### **Explosion data**

<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.

<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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## **6. Accidental release measures**

#### **Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
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<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.
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#### **Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent materials or runoff from entering drains, sewers, streams, ground water or bodies of water.
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**Methods for cleaning up** Ensure adequate ventilation. Ventilate the area.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Keep container closed when not in use. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Take off contaminated clothing and wash before reuse.

**General hygiene considerations** Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Do not store in reactive metal containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from oxidizing and acidic materials.

## 8. Exposure controls/personal protection

### Control Parameters

#### Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Lanthanum trichloride heptahydrate 10025-84-0	TWA: 10 mg/m <sup>3</sup> inhalable particles, recommended TWA: 3 mg/m <sup>3</sup> respirable particles, recommended (related to Particulates not otherwise classified (PNOC))	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction TWA: 15 mppcf respirable fraction TWA: 50 mppcf total dust (related to Particulates not otherwise classified (PNOC))	-

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Tight sealing safety goggles.

**Hand protection** Wear suitable gloves.

<b>Skin and body protection</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Powder
<b>Physical state</b>	Solid
<b>Color</b>	White
<b>Odor (includes odor threshold)</b>	Odorless

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	91 °C	Decomposes
Boiling point (or initial boiling point or boiling range)		Decomposes
Flammability		Not flammable
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Flash point		Not flammable
Autoignition temperature		No data available
Decomposition temperature		No data available
SADT (°C)		No data available
pH	5	100 g/L solution @ 20 °C
pH (as aqueous solution)		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Solubility		No data available
Water solubility		Very Soluble in water
Partition coefficient n-octanol/water (log value)		No data available
Vapor pressure (includes evaporation rate)		No data available
Evaporation rate		No data available
Density and/or relative density		No data available
Bulk density		No data available
Liquid Density		No data available
Relative vapor density		No data available
Particle characteristics		
Particle Size		No data available
Particle Size Distribution		No data available

### Other information

<b>Molecular weight</b>	371.38 g/mol
<b>VOC content</b>	No information available
<b>Softening point</b>	No information available

### Information with regard to physical hazard classes

<b>Explosives</b>	
Explosive properties	Not considered to be explosive
<b>Oxidizing properties</b>	No information available

## 10. Stability and reactivity

<b>Reactivity</b>	Violent reactions possible with strong acids and strong oxidizing agents.
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<b>Chemical stability</b>	Hygroscopic.
<b>Possibility of hazardous reactions</b>	Reacts with strong acids. Reacts with strong oxidizing agents.
<b>Conditions to avoid</b>	Protect from moisture. Avoid storing near oxidizing or reducing agents.
<b>Incompatible materials</b>	Strong acids, Strong oxidizing agents, Moisture, Metals.
<b>Hazardous decomposition products</b>	Hydrogen chloride gas, and/or, Oxides of lanthanum.

## 11. Toxicological information

### Information on likely routes of exposure

#### **Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. Dusts of this product may cause irritation of the nose, throat, respiratory tract. Cough.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. Causes skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea,

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Coughing and/ or wheezing. Burning sensation. May cause blindness. Redness. Itching. Rashes. Hives. Stomach pain. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Burning.
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### Acute toxicity

#### **Numerical measures of toxicity**

<b>Oral LD50</b>	4184 mg/kg
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	May cause skin irritation.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes burns. Causes serious eye damage.
<b>Respiratory or skin sensitization</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.

<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.
<b>Other adverse effects</b>	No information available.
<b>Interactive effects</b>	No information available.

## 12. Ecological information

<b>Ecotoxicity</b>	Toxic to aquatic life with long lasting effects.
<b>Persistence and degradability</b>	No information available.
<b>Bioaccumulation</b>	No information available.
<b>Mobility</b>	No information available.
<b>Other adverse effects</b>	No information available.

## 13. Disposal considerations

### Disposal methods

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.

## 14. Transport information

### **Note:**

General: In small packages, such as most consumer sizes, the products may be eligible for limited quantity exceptions. Details depend on package and mode of transport. If shipped in larger quantities, product is fully regulated as defined below.

### DOT

<b>UN number or ID number</b>	UN1759
<b>Proper shipping name</b>	CORROSIVE SOLIDS, N.O.S.
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	III
<b>Special Provisions</b>	128, IB8, IP3, T1, TP33
<b>DOT Marine Pollutant</b>	I
<b>Marine pollutant</b>	Lanthanum trichloride heptahydrate
<b>Description</b>	UN1759, CORROSIVE SOLIDS, N.O.S. (Lanthanum trichloride heptahydrate), 8, III, Marine pollutant

### IATA

<b>UN number or ID number</b>	UN1759
<b>UN proper shipping name</b>	Corrosive solid, n.o.s.

<b>IATA Technical Name</b>	Lanthanum trichloride heptahydrate
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>Special Provisions</b>	A3, A803
<b>ERG Code</b>	8L
<b>Description</b>	UN1759, Corrosive solid, n.o.s. (Lanthanum trichloride heptahydrate), 8, III

**IMDG**

<b>UN number or ID number</b>	UN1759
<b>UN proper shipping name</b>	Corrosive solid, n.o.s.
<b>Technical Name</b>	Lanthanum trichloride heptahydrate
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	III
<b>Marine pollutant indicator</b>	P
<b>Marine pollutant name</b>	Lanthanum trichloride heptahydrate
<b>Special Provisions</b>	223, 274
<b>EmS-No.</b>	F-A S-B
<b>Description</b>	UN1759, Corrosive solid, n.o.s. (Lanthanum trichloride heptahydrate), 8, III, Marine pollutant

## 15. Regulatory information

**International Inventories**

Contact supplier for inventory compliance status

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**TSCA**

Substance is not listed on the TSCA inventory (the anhydrous form, CAS #10099-58-8, is listed on the TSCA inventory)

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations.

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 3	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 3	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	Environmental Protection Agency
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean Existing Chemicals Inventory

LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NTP	National Toxicology Program (United States)
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (A EGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Issuing Date** 06-Dec-2024

**Revision date** 06-Mar-2025

**Revision Note** SDS sections updated. 3. 8. 16.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**