

Safety Data Sheet

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SDS Revision Date:

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1. Identification

1.1. Product identifier

Product Identity

RELEASE[®]

Alternate Names

RELEASE[®]

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use

See Technical Data Sheet.

Application Method

See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name

Pharmacal Research Labs., Inc.
562 Captain Neville Dr.
Waterbury, CT 06705, USA

24 hour Emergency Telephone No.:

CHEMTREC (USA)

(800) 424-9300

IN CANADA CALL CANUTEC

(613) 996-6666

Customer Service: Pharmacal Research Labs., Inc.

203-755-4908, (800)-243-5350

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Acute Tox. 5;H303

May be harmful if swallowed. (Not adopted by US OSHA)

Skin Corr. 1A;H314

Causes severe skin burns and eye damage.

Eye Dam. 1;H318

Causes serious eye damage.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

H303 May be harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

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[Prevention]:

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

[Storage]:

P406 Store in corrosive resistant container with a resistant inner liner.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Potassium hydroxide. CAS Number: 0001310-58-3	10 - 25	Acute Tox. 4;H302 Skin Corr. 1A;H314	[1][2]
pentasodium triphosphate CAS Number: 0007758-29-4	1.0 - 10	Not Classified	[1]
Diphosphoric acid, tetrapotassium salt CAS Number: 0007320-34-5	1.0 - 10	Eye Irrit. 2;H319	[1]
Tetrasodium EDTA CAS Number: 0000064-02-8	1.0 - 10	Acute Tox. 4;H302 Eye Dam. 1;H318	[1]
Phosphoric acid CAS Number: 0007664-38-2	1.0 - 10	Skin Corr. 1B;H314 (> 25%)	[1][2]
Silicic acid, potassium salt CAS Number: 0001312-76-1	1.0 - 10	Skin Corr. 1B;H314 Eye Dam. 1;H318 Met. Corr. 1;H290 STOT SE 3;H335	[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

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4. First aid measures

4.1. Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Move to fresh air. Consult a physician if irritation of respiratory passages occur.
Eyes	Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin	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	Do NOT induce vomiting. Rinse mouth and slowly drink several glasses of water. Call a physician. Do NOT give anything by mouth to an unconscious or convulsing person.

4.2. Most important symptoms and effects, both acute and delayed

Overview **Emergency Overview:** Can cause headache, dizziness, drowsiness, or irritation to the skin, eyes, and respiratory system. If inhaled, leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention immediately.

Potential Health Effect/Rate of Entry:

Inhalation: Can cause headache, dizziness, nausea, drowsiness, stupor, irritation to respiratory system.

Eyes: Can cause irritation.

Ingestion: Can cause gastrointestinal irritation.

Skin: Can cause irritation.

Aggravated Medical Conditions: Pre-existing eye, skin, liver, and respiratory disorders may be aggravated by exposure.

Variability Among Individuals: Health studies have shown that individual sensitivities vary from person to person. As a precaution, exposure to vapors, liquids, mists, or fumes should be minimized.

Effects of Overexposure: (Signs and symptoms of exposure) High vapor concentrations (>1000 ppm) are irritating to the eyes and the respiratory tract, and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death.

Pre-existing Medical Conditions Which May be Aggravated by Exposure: Person with pre-existing central nervous system disease, skin disorders, or chronic respiratory disease should avoid exposure to this product. See section 2 for further details.

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Eyes	Causes serious eye damage.
Skin	Causes severe skin burns and eye damage.
Ingestion	May be harmful if swallowed. (Not adopted by US OSHA)

5. Fire-fighting measures

5.1. Extinguishing media

Extinguishing media should be suitable for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Potassium oxides

Do not breathe mist / vapors / spray.

5.3. Advice for fire-fighters

Use full protective clothing and self-contained breathing apparatus. This product may be corrosive to human tissue. Extinguishing media should be suitable for surrounding fire.

ERG Guide No. 154

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Protective clothing and equipment must be worn. Contain spill or leakage in suitable container or holding area. Do not allow drainage to sewers, streams or storm drains. Recover with vacuum equipment and flush with water. Spilled material is slippery.

“EMPTY” CONTAINER WARNINGS: Do not reuse empty container. Triple rinse with water - dispose of in conformance with federal, state, and local regulations.

7. Handling and storage

7.1. Precautions for safe handling

Keep in well ventilated area - store above 10°C (50°F). Use goggles or face shield, rubber gloves, and boots where contact is expected.

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See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Containers should be stored in a cool, dry, well-ventilated area. Exercise due caution to prevent damage to or leakage from the container. Keep containers closed when not in use.

Incompatible materials: Incompatible with strong oxidizers, leather and halogenated compounds. Product will react with 'soft' metals such as aluminum, tin, magnesium, and zinc releasing flammable hydrogen gas.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

Keep out of reach of children.

For professional use only.

Do not mix with any other chemicals unless compatibility has been established by the manufacturer.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000064-02-8	Tetrasodium EDTA	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0001310-58-3	Potassium hydroxide.	OSHA	No Established Limit
		ACGIH	Ceiling: 2 mg/m3
		NIOSH	C 2 mg/m3
		Supplier	No Established Limit
0001312-76-1	Silicic acid, potassium salt	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0007320-34-5	Diphosphoric acid, tetrapotassium salt	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0007664-38-2	Phosphoric acid	OSHA	TWA 1 mg/m3
		ACGIH	TWA: 1 mg/m3 STEL: 3 mg/m3
		NIOSH	TWA 1 mg/m3 ST 3 mg/m3
		Supplier	No Established Limit
0007758-29-4	pentasodium triphosphate	OSHA	No Established Limit
		ACGIH	No Established Limit

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		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000064-02-8	Tetrasodium EDTA	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0001310-58-3	Potassium hydroxide.	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0001312-76-1	Silicic acid, potassium salt	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007320-34-5	Diphosphoric acid, tetrapotassium salt	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007664-38-2	Phosphoric acid	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007758-29-4	pentasodium triphosphate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory

Use NIOSH/MSHA approved mist respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits.

Eyes

Chemical Splash goggles or face shield

Skin

Chemical resistant clothing such as rubber coveralls/apron and boots should be worn. Wear rubber gloves.

Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

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9. Physical and chemical properties

Appearance	Clear Liquid
Odor	Not Measured
Odor threshold	Not Measured
pH	13.5
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	Not Measured
Flash Point	Non Flammable
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (Pa)	Not Measured
Vapor Density	Not Measured
Specific Gravity	1.3
Solubility in Water	Complete @1 ATM and 25 C
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured

9.2. Other information

Physical properties are approximate or typical values and should not be used for precise design purposes.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

Incompatible with strong oxidizers, leather and halogenated compounds. Product will react with 'soft' metals such as aluminum, tin, magnesium, and zinc releasing flammable hydrogen gas.

10.4. Conditions to avoid

Excessive heat and open flame.

Sealed containers may develop explosive pressures under fire conditions. Use water to cool containers exposed to fire.

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Do not allow contact with acids

10.5. Incompatible materials

Incompatible with strong oxidizers, leather and halogenated compounds. Product will react with 'soft' metals such as aluminum, tin, magnesium, and zinc releasing flammable hydrogen gas.

10.6. Hazardous decomposition products

Potassium oxides

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Potassium hydroxide. - (1310-58-3)	365.00, Rat - Category: 4	No data available	No data available	No data available	No data available
pentasodium triphosphate - (7758-29-4)	3,120.00, Rat - Category: 5	No data available	No data available	No data available	No data available
Diphosphoric acid, tetrapotassium salt - (7320-34-5)	No data available	No data available	No data available	No data available	No data available
Tetrasodium EDTA - (64-02-8)	1,000.00, Rat - Category: 4	No data available	No data available	No data available	No data available
Phosphoric acid - (7664-38-2)	1,530.00, Rat - Category: 4	2,740.00, Rabbit - Category: 5	No data available	No data available	No data available
Silicic acid, potassium salt - (1312-76-1)	1,500.00, Rat - Category: 4	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	5	May be harmful if swallowed. (Not adopted by US OSHA)
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	1A	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable

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Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Potassium hydroxide. - (1310-58-3)	Not Available	Not Available	Not Available
pentasodium triphosphate - (7758-29-4)	Not Available	Not Available	Not Available
Diphosphoric acid, tetrapotassium salt - (7320-34-5)	Not Available	Not Available	Not Available
Tetrasodium EDTA - (64-02-8)	486.00, Lepomis macrochirus	610.00, Daphnia magna	100.00 (72 hr), Scenedesmus subspicatus
Phosphoric acid - (7664-38-2)	Not Available	Not Available	Not Available
Silicic acid, potassium salt - (1312-76-1)	301.00, Lepomis macrochirus	500.00, Daphnia magna	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

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13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN1760	UN1760	UN1760
14.2. UN proper shipping name	Corrosive liquids, n.o.s., (Potassium Hydroxide)	Corrosive liquids, n.o.s., (Potassium Hydroxide)	Corrosive liquids, n.o.s., (Potassium Hydroxide)
14.3. Transport hazard class(es)	DOT Hazard Class: 8 DOT Label: Corrosive	IMDG: 8 Sub Class: Not Applicable	Air Class: 8
14.4. Packing group	II	II	II
14.5. Environmental hazards			
IMDG	Marine Pollutant: No		
14.6. Special precautions for user	No further information		

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	D2B E
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: No Immediate (Acute): Yes Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs (lbs):

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pentasodium triphosphate (5,000.00)

Phosphoric acid (5,000.00)

Potassium hydroxide. (1,000.00)

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

Methanol

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%):

Phosphoric acid

Potassium hydroxide.

Pennsylvania RTK Substances (>1%):

pentasodium triphosphate

Phosphoric acid

Potassium hydroxide.

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

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H335 May cause respiratory irritation.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

The information and recommendations contained herein are, to the best of Pharmacal's knowledge and belief, accurate and reliable as of the date issued. Pharmacal does not warrant or guarantee their accuracy or reliability, and Pharmacal shall not be liable for any loss or damage arising out of their use thereof.

The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.

The hazardous materials identification system (HMIS) and national fire protection association ratings have been included by Pharmacal research laboratories INC. In order to provide additional health and hazard information. The ratings recommended are based upon criteria supplied by the developers of these rating systems, together with Pharmacal's interpretation of the available data.

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