

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 05/19/2024 Reviewed on 05/19/2024

1 Identification

- · Product Identifier
- · Trade Name: Post-column Acid reagent
- · Product Number: PSP-R2
- · Relevant identified uses of the substance or mixture and uses advised against:
- · Product Description: Post-column reagent for paralytic shellfish toxins analysis
- · Details of the Supplier of the Safety Data Sheet:
- Manufacturer/Supplier:
 Pickering Laboratories, Inc.
 1280 Space Park Way
 Mountain View, CA 94043
 Phone: (650) 694-6700

Fax: (650) 968-0749 www.pickeringlabs.com support@pickeringlabs.com

Emergency telephone number:

Clean Harbors Environmental Services

1-800-645-8265

2 Hazard(s) Identification

· Classification of the substance or mixture:



Health hazard

Specific Target Organ Toxicity - Repeated Exposure 2 H373 May cause damage to organs through prolonged or repeated exposure.



Corrosive to Metals 1 H290 May be corrosive to metals.

Skin Corrosion 1C H314 Causes severe skin burns and eye damage.

- · Label elements:
- · Hazard pictograms:





· Signal word: Danger · Hazard statements:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P234 Keep only in original container.
P260 Do not breathe dusts or mists.
P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

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P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/

shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

P314 Get medical advice/attention if you feel unwell.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

P405 Store locked up.

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

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

Unknown acute toxicity:

This value refers to knowledge of known, established toxicological or ecotoxicological values.

0 % of the mixture consists of component(s) of unknown toxicity.

· Classification system: NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· NFPA ratings (scale 0 - 4)



Health = 4 Fire = 0 Reactivity = 0

The substance possesses oxidizing properties.

· HMIS-ratings (scale 0 - 4)



Health = 4Fire = 0

REACTIVITY O Physical Hazard = 0

· Hazard(s) not otherwise classified (HNOC): None known

3 Composition/Information on Ingredients

· Non-hazardous components:

7732-18-5 Water, distilled water, deionized water

95%

5%

- · Chemical characterization: Substance
- · Description: Mixture of substances listed below with non-hazardous additions.

· Dangerous Components:

7697-37-2 Nitric Acid

Oxidizing Liquids 2, H272; Corrosive to Metals 1, H290; Skin Corrosion 1A, H314 Specific concentration limits: Oxidizing Liquids 2; H272: C ≥ 99 %

Oxidizing Liquids 3; H272: 70 % ≤ C < 99 %

· Additional information:

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

4 First-Aid Measures

- · Description of first aid measures
- · General information: If symptoms persist, call a physician.

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· After inhalation:

If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay. Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs). As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested. Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may

be considered.

· After skin contact:

Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor.

· After eye contact:

Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

· After swallowing:

For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Transport to hospital or doctor without delay.

- · Information for doctor
- · Most important symptoms and effects, both acute and delayed: No further relevant information available.
- Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

5 Fire-Fighting Measures

- Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- For safety reasons unsuitable extinguishing agents: No further relevant information.
- · Special hazards arising from the substance or mixture: No further relevant information available.
- · Advice for firefighters
- Special protective equipment for firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

- · Personal precautions, protective equipment and emergency procedures: Not required.
- · *Environmental precautions:* Dilute with plenty of water.
- Methods and material for containment and cleaning up:

Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).

Dispose of the collected material according to regulations.

Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.



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See Section 13 for disposal information.

· PAC-1:

All components have the value 0.16 ppm.

· PAC-2:

All components have the value 24 ppm.

PAC-3:

All components have the value 92 ppm.

7 Handling and Storage

- · Handling
- · Precautions for safe handling:

Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. ALWAYS add material to water and NEVER water to material.

Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

- Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- · Storage
- Requirements to be met by storerooms and receptacles:

Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

- · Additional information about design of technical systems: No further data; see section 7.
- · Control parameters:
- · Components with occupational exposure limits:

7697-37-2 Nitric Acid (5%)

PEL Long-term value: 5 mg/m³, 2 ppm REL Short-term value: 10 mg/m³, 4 ppm

Long-term value: 5 mg/m³, 2 ppm

TLV Short-term value: (4) NIC-0.025 ppm

Long-term value: (2) ppm

NIC-A4

- · Additional information: The lists that were valid during the creation of this SDS were used as basis.
- · Exposure controls:
- · Personal protective equipment
- General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

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Wash hands before breaks and at the end of work.

- · Breathing equipment: Not required.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Elbow length PVC gloves

Penetration time of glove material:

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· Eye protection:



Safety glasses

· Limitation and supervision of exposure into the environment: None

9 Physical and Chemical Properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid Color: Clear

Odor: CharacteristicOdor threshold: Not determined.

· pH-value @ 20 °C (68 °F): <1

Change in condition

Melting point/Melting range: <0 °C (<32 °F)
Boiling point/Boiling range: >100 °C (>212 °F)

· Flash point: None

Flammability (solid, gaseous): Not applicable.
 Auto igniting: Not applicable
 Decomposition temperature: Not determined.

· *Ignition temperature:* Product is not self-igniting.

• Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.
Upper: Not determined.

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· Vapor pressure: Not determined.

• **Density @ 20 °C (68 °F):** 1.03 g/cm³ (8.5954 lbs/gal)

Relative density: Not determined.
Vapor density: Not determined.
Evaporation rate: Not determined.

· Solubility in / Miscibility with:

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined. **Kinematic:** Not determined.

· Solvent content:

VOC content: 0.00 %

· Other information: No further relevant information available.

10 Stability and Reactivity

- · Reactivity: No further relevant information available.
- · Chemical stability: Product is stable under normal conditions.
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions: No dangerous reactions known.
- · Conditions to avoid: Extremes of temperature and direct sunlight.
- · Incompatible materials:

Inorganic acids are generally soluble in water with the release of hydrogen ions. The resulting solutions have pH's of less than 7.0. Inorganic acids neutralise chemical bases (for example: amines and inorganic hydroxides) to form salts - neutralisation can generate dangerously large amounts of heat in small spaces. The dissolution of inorganic acids in water or the dilution of their concentrated solutions with additional water may generate significant heat. The addition of water to inorganic acids often generates sufficient heat in the small region of mixing to cause some of the water to boil explosively. The resulting 'bumping' can spatter the acid. Inorganic acids react with active metals, including such structural metals as aluminum and iron, to release hydrogen, a flammable gas. Inorganic acids can initiate the polymerisation of certain classes of organic compounds. Inorganic acids react with cyanide compounds to release gaseous hydrogen cyanide. Inorganic acids generate flammable and/or toxic gases in contact with dithiocarbamates, isocyanates, mercaptans, nitrides, nitriles, sulfides, and strong reducing agents. Additional gas-generating reactions occur with sulfites, nitrites, thiosulfates (to give H2S and SO3), dithionites (SO2), and even carbonates. Acids often catalyse (increase the rate of) chemical reactions.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

- · Information on toxicological effects:
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

7697-37-2 Nitric Acid

Oral LD50 >90 mg/kg (Rat)

- · Primary irritant effect:
- · On the skin: Strong caustic effect on skin and mucous membranes.
- · On the eye: Corrosive effect.

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· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Swallowing will lead to a corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· Carcinogenic categories:

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

^{*} 12 Ecological Information

- · Toxicity:
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential: No further relevant information available.
- · Mobility in soil: No further relevant information available.
- Additional ecological information:
- · General notes:

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- Results of PBT and vPvB assessment:
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects: No further relevant information available.

13 Disposal Considerations

- · Waste treatment methods
- Recommendation:

Must not be disposed of together with household waste. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.

- Uncleaned packaging
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport Information

· UN-Number:

· DOT, ADR/ADN, IMDG, IATA

UN proper shipping name:

· DOT

· ADR/ADN

· ADR/ADN · IMDG, IATA UN3264

Corrosive liquid, acidic, inorganic, n.o.s.

UN3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.

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- · Transport hazard class(es):
- · DOT



· Class: 8 Corrosive substances

· Label:

· ADR/ADN



· Class: 8 (C1) Corrosive substances

· Label:

· IMDG, IATA



· Class: 8 Corrosive substances

· Label:

· Packing group:

· DOT, ADR/ADN, IMDG, IATA Ш

· Environmental hazards: Not applicable.

· Special precautions for user: Warning: Corrosive substances

Hazard identification number (Kemler code): 80 · EMS Number: F-A,S-B Segregation groups: (SGG1) Acids

· Stowage Category Α

· Stowage Code SW2 Clear of living quarters.

· Segregation Code SG36 Stow "separated from" SGG18-alkalis.

SG49 Stow "separated from" SGG6-cyanides

· Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code:

Not applicable.

· Transport/Additional information:

· DOT

· Quantity limitations: On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

· ADR/ADN

· Excepted quantities (EQ): Code: E1

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

· IMDG

5L · Limited quantities (LQ):

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Trade Name: Post-column Acid reagent

• Excepted quantities (EQ): Code: E1

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation": UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC,

N.O.S. 8, III

*15 Regulatory Information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture: No further relevant information available.
- · SARA (Superfund Amendments and Reauthorization):
- Section 355 (extremely hazardous substances):

All ingredients are listed.

· Section 313 (Specific toxic chemical listings):

All ingredients are listed.

TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

· Hazardous Air Pollutants

None of the ingredients are listed.

- · California Proposition 65:
- · Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

New Jersey Right-to-Know List:

All ingredients are listed.

New Jersey Special Hazardous Substance List:

All components have the value CO, R2.

Pennsylvania Right-to-Know List:

All ingredients are listed.

Pennsylvania Special Hazardous Substance List:

All components have the value E.

- · Carcinogenic categories:
- · EPA (Environmental Protection Agency):

None of the ingredients are listed.

· TLV (Threshold Limit Value established by ACGIH):

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health):

None of the ingredients are listed.



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· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms:





· Signal word: Danger

· Hazard statements:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P234 Keep only in original container.
P260 Do not breathe dusts or mists.
P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/

shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

P314 Get medical advice/attention if you feel unwell.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

P405 Store locked up.

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

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

National regulations:

The product is not subject to be labelled according with the prevailing version of the regulations on hazardous substances.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

<u>16 Ot</u>her Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· Contact:

· Abbreviations and acronyms:

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)



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HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit REL: Recommended Exposure Limit

Oxidizing Liquids 2: Oxidizing liquids – Category 2
Corrosive to Metals 1: Corrosive to metals – Category 1

Skin Corrosion 1A: Skin corrosion/irritation – Category 1A
Skin Corrosion 1C: Skin corrosion/irritation – Category 1C

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) - Category 2

* Data compared to the previous version altered.

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