

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : PSR®

1.2. Recommended use and restrictions on use

Recommended use : Dilution 30:1 to 40:1. PSR® should be used to clean potable water systems.
 Restrictions on use : None known

1.3. Supplier

Supplier

Trac Ecological, A Drew Marine Business
 400 Captain Neville Dr.,
 Waterbury, CT 06705 USA
 T (973) 526-5700
info@trac-online.com - www.trac-online.com

1.4. Emergency telephone number

Emergency number : +1-800-255-3924

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Corrosive to metals Category 1	H290	May be corrosive to metals
Skin corrosion/irritation Category 1	H314	Causes severe skin burns and eye damage
Serious eye damage Category 1	H318	Causes serious eye damage
Full text of H statements : see section 16		

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
 Hazard statements (GHS US) : H290 - May be corrosive to metals
 H314 - Causes severe skin burns and eye damage
 Precautionary statements (GHS US) : P234 - Keep only in original container.
 P260 - Do not breathe mist, vapors.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P280 - Wear eye protection, protective gloves, protective clothing, face protection.
 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 or doctor/physician.
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P310 - Immediately call a POISON CENTER or doctor/physician.
 P363 - Wash contaminated clothing before reuse.
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
 P310 - Immediately call a POISON CENTER or doctor/physician.
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
 P310 - Immediately call a POISON CENTER or doctor/physician.
 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 to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Phosphoric acid	CAS-No.: 7664-38-2	60 – 80
Triethanolamine	CAS-No.: 102-71-6	5 – 10

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician immediately.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Immediately flush skin with plenty of water for at least 30 minutes. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Causes eye and skin burns. Severe corrosion to the respiratory tract at high concentrations. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Inhalation : Corrosive to the respiratory tract. May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.

Skin : Causes severe burns.

Eyes : Causes serious eye burns. Serious damage to eyes.

Ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic symptoms : None known.

4.3. Immediate medical attention and special treatment, if necessary

Get immediate medical attention.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media : None.

5.2. Specific hazards arising from the chemical

Fire hazard : This product is not classified as flammable or combustible.
Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂). Nitrogen oxides. Phosphorus oxides. Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Cool down the containers exposed to heat with a water spray. Fight fire from safe distance and protected location.
Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing. Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Do not touch or walk on the spilled product. Do not get in eyes, on skin, or on clothing. Wear suitable protective clothing. Do not breathe vapors. Ventilate spillage area.

6.1.1. For non-emergency personnel

Emergency procedures : Avoid contact with skin and eyes. Do not breathe vapors.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb and/or contain spill with inert material, then place in suitable container.
Other information : Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Wash hands with water and soap. Do not breathe mist, vapors. Ensure adequate ventilation.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.
Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in corrosive resistant container with a resistant inner liner. Keep only in original container.
Store in dry, cool, well-ventilated area. Keep container closed when not in use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

PSR®	
No additional information available	
Phosphoric acid (7664-38-2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Phosphoric acid
ACGIH OEL TWA	1 mg/m ³
ACGIH OEL STEL	3 mg/m ³
Remark (ACGIH)	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Phosphoric acid
OSHA PEL (TWA)	1 mg/m ³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Triethanolamine (102-71-6)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Triethanolamine
ACGIH OEL TWA	5 mg/m ³
Remark (ACGIH)	TLV® Basis: Eye & skin irr
Regulatory reference	ACGIH 2021

8.2. Appropriate engineering controls

Appropriate engineering controls : Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:

Impervious clothing

Hand protection:

Wear impervious gloves. Consult supplier for specific recommendations.

Eye protection:

Use suitable eye protection. Goggles + face shield

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In operations where exposure limits are exceeded or exposure levels are excessive, an approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Appearance	: Clear blue-green liquid.
Color	: Green
Odor	: Amine-like
Odor threshold	: No data available
pH	: 0.9
Melting point	: No data available
Freezing point	: -37 °C
Boiling point	: 167 °C
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: Same as water
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.61
Solubility	: Miscible with water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

May be corrosive to some metals.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Keep away from oxidizers, strong acids and strong bases. metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity (oral) : Not classified
 Acute toxicity (dermal) : Not classified
 Acute toxicity (inhalation) : Not classified

Phosphoric acid (7664-38-2)

LD50 oral rat	1530 mg/kg
LD50 dermal rabbit	2740 mg/kg
ATE US (oral)	1530 mg/kg body weight
ATE US (dermal)	2740 mg/kg body weight

Triethanolamine (102-71-6)

LD50 oral rat	6400 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE US (oral)	6400 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns.
 pH: 0.9
 Serious eye damage/irritation : Causes serious eye damage.
 pH: 0.9
 Respiratory or skin sensitization : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified

Triethanolamine (102-71-6)

NOAEL (chronic,oral,animal/male,2 years)	63 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies)
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
 STOT-single exposure : Not classified
 STOT-repeated exposure : Not classified

Phosphoric acid (7664-38-2)

NOAEL (oral,rat,90 days)	250 mg/kg body weight
--------------------------	-----------------------

Triethanolamine (102-71-6)

NOAEL (oral,rat,90 days)	1000 mg/kg body weight
--------------------------	------------------------

Aspiration hazard : Not classified
 Viscosity, kinematic : No data available

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/effects	: Causes eye and skin burns. Severe corrosion to the respiratory tract at high concentrations. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Inhalation	: Corrosive to the respiratory tract. May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
Skin	: Causes severe burns.
Eyes	: Causes serious eye burns. Serious damage to eyes.
Ingestion	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Chronic symptoms	: None known.

SECTION 12: Ecological information**12.1. Toxicity**

Ecology - general : Before neutralization, the product may represent a danger to aquatic organisms.

Phosphoric acid (7664-38-2)

EC50 - Crustacea [1]	> 100 mg/l
NOEC chronic algae	100 mg/l

Triethanolamine (102-71-6)

LC50 - Fish [1]	11800 mg/l <i>Pimephales promelas</i> (Fathead minnow)
EC50 - Crustacea [1]	609.88 mg/l <i>Ceriodaphnia dubia</i>
NOEC chronic fish	> 1 mg/l

12.2. Persistence and degradability**Phosphoric acid (7664-38-2)**

Persistence and degradability	Readily biodegradable.
-------------------------------	------------------------

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects




No additional information available

SECTION 13: Disposal considerations**13.1. Disposal methods**

Regional legislation (waste)	: Dispose of in accordance with applicable federal, state, and local regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

DOT	IMDG	IATA
14.1. UN number		
1805	1805	1805
14.2. Proper Shipping Name		
Phosphoric acid solution	PHOSPHORIC ACID SOLUTION	Phosphoric acid, solution
14.3. Transport hazard class(es)		
8	8	8
 Not applicable		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

- DOT**
- UN-No.(DOT) : UN1805
 - DOT Special Provisions (49 CFR 172.102) : A7 - Steel packaging must be corrosion-resistant or have protection against corrosion.
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
 - DOT Packaging Exceptions (49 CFR 173.xxx) : 154
 - DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
 - DOT Packaging Bulk (49 CFR 173.xxx) : 241
 - DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
 - DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
 - DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
 - DOT Vessel Stowage Other : 53 - Stow "separated from" alkaline compounds, 58 - Stow "separated from" cyanides
- IMDG**
- Special provision (IMDG) : 223
 - Limited quantities (IMDG) : 5 L
 - Excepted quantities (IMDG) : E1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Miscible in water. Mildly corrosive to most metals.

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3, A803
ERG code (IATA)	: 8L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Phosphoric acid (7664-38-2)

CERCLA RQ	5000 lb
-----------	---------

15.2. International regulations

CANADA

Phosphoric acid (7664-38-2)

Listed on the Canadian DSL (Domestic Substances List)

Triethanolamine (102-71-6)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Phosphoric acid(7664-38-2)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - New Jersey - Right to Know Hazardous Substance List
Triethanolamine(102-71-6)	U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases	
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.