

## Keetrol Plus, Stain & Scale

### 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** Keetrol Plus, Stain & Scale  
**Synonyms:** Keetrol, Keetrol Plus, Stain & Scale, Metal Control, Diamond Control, Iron Out, Anti-Stain & Scale, Less Iron I, Spa Bright, Spa Control, Riviera Metal Control, Riviera Stain & Scale Preventative, Rising Sun Metal Eliminator, Spatique Control, Quality Mineral Out, POOL WORLD Metal Magnet, Aqua Pro Stain & Scale, Stain & Scale Preventer, Nature's Way Stain and Scale Control, Nature's Way Spa Metal Control, Ideal Stain Control  
**Common Name:** 1,2,4-Butanetricarboxylic acid, 2-phosphono- (PBTC)  
**SDS Number:** 2  
**Revision Date:** 3/14/2018  
**Version:** 1  
**CAS Number:** 37971-36-1  
**Product Description:** Light yellow liquid  
**Product Use:** Stain and Scale Control  
**Instructions:** Only in the event of a transportation emergency involving spills, leaks, fires or accidents call Chemtrec at (800) 424-9300  
**Supplier Details:** N. Jonas & Co., Inc.  
4520 Adams Circle, P.O. Box 425  
Bensalem, PA 19020  
**Phone:** 215-639-8071

### 2 HAZARDS IDENTIFICATION

#### Classification of Substance

##### GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Skin corrosion/irritation, 1  
Health, Serious Eye Damage/Eye Irritation, 1  
Physical, Corrosive to Metals, 1  
Health, Serious Eye Damage/Eye Irritation, 2 A

#### GHS Label Elements, Including Precautionary Statements

**GHS Signal Word:** **DANGER**

**GHS Hazard Pictograms:**



**GHS Hazard Statements:**

H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H290 - May be corrosive to metals  
H319 - Causes serious eye irritation

**GHS Precautionary Statements:**

P102 - Keep out of reach of children.  
P103 - Read label before use.  
P302 + P352 - IF ON SKIN: Wash with plenty of water/...  
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P280f - Wear eye protection/face protection.

#### Hazards not Otherwise Classified (HNOC) or not Covered by GHS

**Inhalation:** May be harmful if inhaled.  
**Skin Contact:** Hazardous in case of skin contact (irritant, corrosive). Skin contact may produce burns. This product will probably not be absorbed through human skin.  
**Eye Contact:** Very hazardous in case of eye contact (irritant, corrosive).



# SDS

**SDS**  
N. Jonas & Co., Inc.

## Keetrol Plus, Stain & Scale

**Ingestion:** Although this material is not expected to be ingested, undiluted product will probably be corrosive to mouth and throat tissues.

### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients		
CAS#	%	Chemical Name
37971-36-1		1,2,4-Butanetricarboxylic acid, 2-phosphono-

### 4 FIRST AID MEASURES

**Inhalation:** Remove victim to fresh air. If individual experiences nausea, headache, dizziness, has difficulty breathing or is cyanotic, consult medical personnel immediately.

**Skin Contact:** Remove contaminated clothing. Wash material off the skin with soap and plenty of water. If redness, itching or a burning sensation develops, get medical attention. Launder contaminated clothing before reuse.

**Eye Contact:** Immediately flush eyes with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel.

**Ingestion:** Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. Never give anything by mouth to an unconscious person.

### 5 FIRE FIGHTING MEASURES

**Flash Point:** Does not flash

Use water fog, carbon dioxide, foam or dry chemical.  
Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.  
Oxides of carbon, phosphoric acid and other unidentified combustion products.

### 6 ACCIDENTAL RELEASE MEASURES

**Avoid skin and eye contact with liquid. Soak up material and shovel into a chemical waste container. Remove container from work area.**

### 7 HANDLING AND STORAGE

**Handling Precautions:** Wear skin and eye protective equipment. Avoid breathing vapors or spray mists.

**Storage Requirements:** Store in a cool, dry place. Keep container tightly closed.

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use ventilation adequate to maintain safe levels. Provide eyewash station and safety shower in work area.

**Personal Protective Equipment:** Use MSHA/NIOSH approved respirator for organic vapors, dusts and fumes whose TLV is greater than 0.05 mg/m3.



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Wear chemical resistant gloves, body-protecting clothing and chemical resistant safety shoes.

Indirect ventilation goggles.

**No ACGIH TLV or OSHA PEL assigned to this product.**  
Minimize exposure in accordance with good hygiene practice.

### 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light yellow liquid	Solubility:	Soluble
Specific Gravity or Density:	1.28 g/m <sup>3</sup>	Percent Volatile:	50%
Potential Hydrogenii:	<2 (10% aqueous)		

### 10 STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions.
Materials to Avoid Identification:	Steel, strong bases, strong oxidizers and strong alkali.
Hazardous Decomposition:	Oxides of carbon, phosphoric acid and other unidentified combustion products.
Hazardous Polymerization:	Will not occur.

### 11 TOXICOLOGICAL INFORMATION

**Inhalation Tox:** May be harmful if inhaled. Effects will depend upon solution strength and length of time of exposure.

**Skin Contact:** Hazardous in case of contact (corrosive, irritant). Skin contact may produce burns.. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Eye Contact:** Very hazardous in case of eye contact (irritant, corrosive). Inflammation of the eye is characterized by redness, watering and itching.

**Ingestion Tox:** The acute oral LD50 is greater than 2,000 mg/kg of body weight (rat). Although this material is not expected to be ingested, undiluted product will probably be corrosive to mouth and throat tissues.

### 12 ECOLOGICAL INFORMATION

This product is completely soluble in water. Because of pH <2, care should be taken to minimize release of undiluted product into the environment.

### 13 DISPOSAL CONSIDERATIONS

**Disposal Method:** Because its pH is below 2, discarded material is a hazardous waste, number D002, 40 CFR 261.22. Dispose of in a facility permitted for hazardous waste.

**Container Disposal:** Empty container retains product residue. Observe all hazard precautions. Do not distribute, furnish, reuse empty container



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except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise

### 14 TRANSPORT INFORMATION

3265, PGIII, ((2-Phosphono-1,2,4-butanetricarboxylic acid))

### 15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

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1,2,4-Butanetricarboxylic acid, 2-phosphono- (37971-36-1) [n/a%] TSCA

Regulatory CODE Descriptions

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TSCA = Toxic Substances Control Act

### 16 OTHER INFORMATION

HMIS III: Health = 3, Fire = 1, Physical Hazard = 0

HMIS	
HEALTH	<input type="checkbox"/> 3
FLAMMABILITY	<input type="checkbox"/> 1
PHYSICAL HAZARD	<input type="checkbox"/> 0
PERSONAL PROTECTION	<input type="checkbox"/>