

Pyrodex® Propellants
SAFETY DATA SHEET
August 2018

NZ DISTRIBUTOR
Steve's Wholesale Ltd.
Units 5 – 7 / 408 The
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Island Bay Wellington
6023
team@steveswholesale.nz
Emergency Contact:
Steve Collings
0800 303 303
0274 905 708
Poison Control 0800
POISON (0800 764 766)

The following Muzzleloading Propellants
are manufactured and distributed by Hodgdon Powder Company.

Granular

Pyrodex® RS **(EX-2017030030)**
Pyrodex® P **(EX-2017030030)**
Pyrodex® Select **(EX-2013031304)**

Pellets

Pyrodex® BP5050 **(EX-2013031283)**
Pyrodex® P5050 **(EX-2016050297)**
Pyrodex® RP4430 **(EX-2012020788)**

1.4C EX Approvals in bold parenthesis

Pyrodex (Granular and Pellets)

Safety Data Sheet

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

Date of issue: 07/03/2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Pyrodex (Granular and Pellets)

Product form : Mixture

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

1.3. Details of the supplier of the safety data sheet

Hodgdon Powder Company, Inc.
6430 Vista Drive
Shawnee, Kansas 66218
USA
(913) 362-9455

1.4. Emergency telephone number

Emergency number : (800) 255-3924 (CHEM-TEL)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Expl. 1.3 H203
Ox. Sol. 1 H271
Acute Tox. 4 (Oral) H302
Carc. 1A H350
STOT RE 1 H372

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H203 - Explosive; fire, blast or projection hazard
H271 - May cause fire or explosion; strong oxidizer
H302 - Harmful if swallowed
H350 - May cause cancer

Precautionary statements (GHS-US) :

H372 - Causes damage to organs through prolonged or repeated exposure
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 - Keep/Store away from combustible materials
P221 - Take any precaution to avoid mixing with combustible materials
P230 - Keep wetted with organic solvent, water
P240 - Ground/Bond container and receiving equipment
P250 - Do not subject to friction, grinding, shock.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear eye protection, protective clothing, protective gloves
P283 - Wear fire/flame resistant/retardant clothing.
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell
P306+P360 - If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
P308+P313 - If exposed or concerned: Get medical advice/attention.
P330 - Rinse mouth.
P370+P378 - In case of fire: Use Carbon dioxide (CO₂), foam to extinguish.
P370+P380 - In case of fire: Evacuate area
P371+P380+P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P372 - Explosion risk in case of fire.
P373 - DO NOT fight fire when fire reaches explosives.
P401 - Store in accordance with local regulations on explosives
P405 - Store locked up.
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous

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waste

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Potassium nitrate	(Cas-No.) 7757-79-1	15-40*
Potassium perchlorate	(CAS-No.) 7778-74-7	15 - 40*
Silica: Crystalline, quartz	(CAS-No.) 14808-60-7	0.5 - 5*
Distillates, petroleum, hydrotreated light naphthenic	(CAS-No.) 64742-53-6	0.1 - 1*

*In accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200), the specific chemical identity or exact weight % has been withheld as a trade secret

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
- First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.
- First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention.
- First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Get medical attention immediately. Continue rinsing.
- First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Get medical attention if you feel unwell.

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

- Symptoms/effects : Harmful if swallowed. May cause cancer.
- Symptoms/effects after inhalation : May cause respiratory irritation.
- Symptoms/effects after skin contact : May cause eye irritation
- Symptoms/effects after eye contact : May cause skin irritation
- Symptoms/effects after ingestion : Harmful if swallowed.
- Chronic symptoms : May cause cancer.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Flood fire area with water from a distance. Dry chemical. Carbon dioxide.
- Unsuitable extinguishing media : Keep away from heat.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : May cause or intensify fire; oxidizer.
- Explosion hazard : Explosive. Mass fire hazard.
- Reactivity : Explosive; mass explosion hazard.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.
- Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

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6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Product is not soluble, but can cause particulate emission of discharged into waterways. Dike all entrances to sewers and drains to avoid introducing material to waterways. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.
Methods for cleaning up : Prevent further leakage or spillage if safe to do so. Do not touch or walk through spilled material. DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.

6.4. Reference to other sections

See Sections 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety procedures. Use personal protective equipment as required. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Use explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep only in original container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Incompatible materials : Acids. Bases. Water. Alcohols. Alkalis. Oxidizing agent. Reducing agents. Nitrites. Amines.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium nitrate (7757-79-1)	
Remark (OSHA)	OELs not established
Distillates, petroleum, hydrotreated light naphthenic (64742-53-6)	
Remark (OSHA)	OELs not established
Potassium perchlorate (7778-74-7)	
Remark (OSHA)	OELs not established
Silica: Crystalline, quartz (14808-60-7)	
ACGIH TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
OSHA PEL (TWA) (mg/m ³)	(30)/(%SiO ₂ + 2) total dust; (10)/(%SiO ₂ + 2) respirable fraction
OSHA PEL (TWA) (ppm)	(250)/(%SiO ₂ + 5) respirable fraction

8.2. Exposure controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment : Gloves. Protective clothing. Wear chemical goggles and face shield in combination.



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Hand protection	: Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl.
Eye protection	: Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles.
Skin and body protection	: Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.
Respiratory protection	: Use NIOSH (or other equivalent national standard) -approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Granular solid.
Color	: Medium to dark gray.
Odor	: Slight sulfur.
Odor Threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: 740 degrees F (granular), 500 degrees F (pellets)
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 0.75 g/cm ³
Solubility	: Water: Partial in water
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Sensitive to mechanical impact.
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Explosive; mass explosion hazard.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

Ignition sources. Heat. Sparks. Open flame. Static electricity. Storage near to reactive materials. Do not subject to shock. Contact with other chemicals. Humidity. Direct heating, dirt, chemical contamination, sunlight, UV or ionizing radiation.

10.5. Incompatible materials

Acids. Water. alcohols. Amines. Alkalis. Oxidizing agent. Reducing agents. Nitrites.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Potassium nitrate (7757-79-1)	
LD50 oral rat	3015 mg/kg

Silica: Crystalline, quartz (14808-60-7)	
LD50 oral rat	500 mg/kg

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer.

Silica: Crystalline, quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Causes severe burns.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : Harmful if swallowed.
Chronic symptoms : May cause cancer.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

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. Waste treatment methods

Waste treatment methods : Product should not be allowed to enter drains, water courses, or the soil. Dispose in a safe manner in accordance with local/national regulations. DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN0499 Propellant, solid, 1.3, II ; UN0501 Propellant, solid, 1.4, II

UN-No.(DOT) : 0499 (for 1.3C) ; 0501 (for 1.4C)

DOT NA no. : UN0499 ; UN0501

Proper Shipping Name (DOT) : Propellant, solid

Class (DOT) : 1.3 - Class 1.3 - Explosives (with predominately a fire hazard) 49 CFR 173.50

1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50

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Hazard labels (DOT) : 1.3C – Explosive 1.4C - Explosive



Packing group (DOT) : II - Medium Danger
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : Forbidden
 DOT Vessel Stowage Location : 04 - The material may be stowed "on deck" or "under deck" on a cargo vessel (up to 12 passengers) but the material is prohibited on a passenger vessel.
 DOT Vessel Stowage Other : 25 - Shade from radiant heat, 26E - Stowage category "13" and, for on deck stowage, non-metallic lining of closed cargo transport unit is required when not in effectively sealed, sift-proof packages; Stowage category "10" permitted when in effectively sealed, sift-proof packages

Additional information

Other information : No supplementary information available.

Transport by sea (IMDG)

UN-No. (IMDG) : 0499 (for 1.3C) ; 0501 (for 1.4C)
 Proper Shipping Name (IMDG) : PROPELLANT, SOLID
 Class (IMDG) : 1 - Explosives

Air transport (IATA)

UN-No. (IATA) : **Forbidden!**
 Proper Shipping Name (IATA) : Propellant, solid
 Class (IATA) : 1 - Explosive

SECTION 15: Regulatory information HSR100176

15.1. US Federal regulations

Pyrodex (Granular and Pellets)	
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt	
SARA Section 311/312 Hazard Classes	Physical hazard - Explosive Physical hazard - Oxidizer (liquid, solid or gas) Health hazard - Carcinogenicity Health hazard - Acute toxicity (any route of exposure) Health hazard - Specific target organ toxicity (single or repeated exposure)

This product or mixture is not known to contain a 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.

15.2. International regulations

No additional information available.

15.3. US State regulations

This product can expose you to Silica: Crystalline, quartz, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Silica: Crystalline, quartz (14808-60-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	No	No	No	
Sulfur (7704-34-9)				
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				

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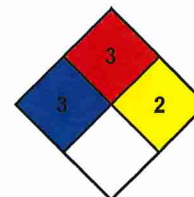
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Potassium nitrate (7757-79-1) U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List
Sodium nitrate (7631-99-4) U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List
Potassium perchlorate (7778-74-7) U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List
Distillates, petroleum, hydrotreated light naphthenic (64742-53-6) U.S. - Massachusetts - Right To Know List
Silica: Crystalline, quartz (14808-60-7) U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information	SW revised 12.01.2021
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Indication of changes : Revision 1.0: New SDS Created.
Revision Date : 7/3/2018
Other information : Author: JLJ.

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
NFPA reactivity : 2 - Materials that readily undergo violent chemical change at elevated temperatures and pressures.



HMIS Hazard Rating

Health : 3*
Flammability : 3
Physical : 2
Personal protection : Special handling directions

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