



Sodium Perborate MSDS

Effective Date: September 10, 2013

24 Hour Emergency Contact:

ChemTel: (800)255-3924

www.pioneerforensics.com

1. PRODUCT AND COMPANY IDENTIFICATION

Product: Sodium Perborate, Monohydrate Powder
Product Code(s): PF052
CAS#: 10332-33-9
Synonyms: Sodium peroxometaborate, monohydrate
Manufacturer: Pioneer Forensics, LLC
804 E. Eisenhower Blvd.
Loveland, CO 80537
Ph: (970) 292-8487
Emergency Number: (800) 255-3924 (CHEM-TEL)
Customer Service: (970) 292-8487

2. HAZARDS IDENTIFICATION

Emergency Overview: DANGER! STRONG OXIDIZER! CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE. HARMFUL IF SWALLOWED. MAY BE HARMFUL IF INHALED OR EXPOSED TO THE EYES OR SKIN.

Safety Ratings: Health: 2, Moderate Reactivity: 3, Severe
Flammability: 0, None Contact: 2, Moderate

OSHA Regulatory Status: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Acute Health Effects:

Routes of Exposure: Inhalation, ingestion, skin contact, eye contact

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: Harmful if swallowed. May cause gastrointestinal tract irritation.

Skin Contact: May be harmful if absorbed through skin. May cause skin irritation.

Eye Contact: May be harmful if exposed to the eyes. May cause eye irritation or permanent eye damage.

Target Organs: Skin, eyes, respiratory tract, gastrointestinal tract

Chronic Health Effects: No information found

Aggravation of Medical Conditions: No information found

Potential Environmental Effects: No information found

3. COMPOSITION AND INFORMATION ON INGREDIENTS

| <u>Components</u> | <u>CAS#</u> | <u>Chemical Formula</u> | <u>Formula Weight</u> | <u>Hazardous</u> | <u>% by Weight</u> |
|-------------------------------|-------------|--------------------------------------|-----------------------|------------------|--------------------|
| Sodium Perborate, Monohydrate | 10332-33-9 | NaBO ₃ • H ₂ O | 99.81 | Yes | 100 |

4. FIRST AID MEASURES

First Aid Procedures:

- Inhalation:** Remove to fresh air. If breathing is difficult, administer oxygen. If the victim is not breathing, give artificial respiration. Get medical attention if symptoms occur.
- Ingestion:** Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Never give anything by mouth to an unconscious person. GET MEDICAL ATTENTION IMMEDIATELY.
- Skin Contact:** In case of contact, wash skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms persist.
- Eye Contact:** Check for and remove contact lenses. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention.
- General Advice:** In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
- Notes to Physician:** Treat symptomatically.

5. FIRE FIGHTING MEASURES

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 1 Special: Oxidizer

Flammable Properties: Non-flammable, but material is a strong oxidizer. May explode from heat or contamination. Contact with combustible materials, reducing agents, or organic materials may cause fire. These substances will accelerate burning when involved in a fire. Some will react explosively with hydrocarbons (fuels). Some may decompose explosively when heated or involved in a fire. Runoff may create fire or explosion hazard. Fire may produce irritating, corrosive and/or toxic gases.

Flash Point: Not applicable

Auto-ignition Temp: Not applicable

Flammable Limits in Air (% by volume): Not applicable

Suitable Extinguishing Media: Water spray, fog

Unsuitable Extinguishing Media: Dry chemical, carbon dioxide, halon

| | |
|---|--|
| Hazardous Combustion Products: | Borane, boron oxides, sodium oxides |
| Specific Hazards: | Contact with combustible, organic, or oxidizable substances may cause extremely violent explosion. Emits toxic fumes when heated to decomposition. Runoff may create a fire or explosion hazard. |
| Special Protective Equipment For Firefighters: | As in any fire, wear MSHA/NIOSH approved (or equivalent) self-contained breathing apparatus with full face piece operated in the pressure-demand or other positive pressure mode and full protective gear. |
| Specific Methods: | In the event of fire and/or explosion do not breathe fumes. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|-----------------------------------|--|
| Personal Precautions: | Ventilate area of leak or spill. Eliminate all sources of ignition. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Keep upwind. Wear appropriate personal protective equipment as specified in the Exposure Control and Personal Protection Section 8. Avoid contact with eyes, skin, and clothing. Avoid inhalation of dusts. Wear a dust mask if dust is generated above exposure limits. |
| Environmental Precautions: | Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. In case of large spill, dike if needed. |
| Methods for Containment: | Stop leak if you can do so without risk. Keep combustibles (wood, paper, oil, etc.) away from spilled material. If sweeping of a contaminated area is necessary, use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas. Dike the spilled material if necessary. |
| Methods for Cleaning Up: | Keep combustibles away from spilled material. Pick up and place in a suitable non-combustible container for reclamation or disposal, using a method that does not generate dust. Clean contaminated surface thoroughly. Never return spills in original containers for re-use. Clean up in accordance with all applicable regulations. |

7. HANDLING AND STORAGE

| | |
|------------------|--|
| Handling: | Wear personal protective equipment (see section 8). Use only in well-ventilated areas. Provide sufficient air exchange and/or exhaust in work rooms. Wear appropriate respiratory equipment in case of insufficient ventilation. Protect from direct sunlight. Avoid contact with skin, eyes and clothing. Do not breathe dust. Keep formation of airborne dusts to a minimum. Do not ingest. Do not eat, drink, or smoke while handling this product. Do not handle near an open flame, heat, or other sources of ignition. Keep away from incompatible materials such as combustibles, reducing agents, organic materials, metals, acids, moisture. Hygroscopic – keep away from moisture and moist air. Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty since they retain product residues. Observe all warnings and precautions listed for the product. |
| Storage: | Store in a cool, dry, ventilated area away from flame, sources of ignition, heat, and incompatible materials. Do not store near combustibles, organic materials, or other oxidizable materials. Keep containers tightly closed and upright. Protect from physical |

damage. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

| | |
|--|---|
| Exposure Limits: | No information found |
| Engineering Controls: | Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits or to acceptable levels. |
| Personal Protective Equipment: | |
| Eye Protection: | Wear safety glasses with side shields or goggles. |
| Skin Protection: | Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves. |
| Respiratory Protection: | A NIOSH- approved dust respirator may be necessary under certain circumstances where airborne concentrations are at unacceptable levels. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. |
| General Hygiene Considerations: | Avoid contact with skin, eyes, clothing, and combustible materials. Remove and wash contaminated clothing promptly. Do not breathe dust. When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Physical State: | Solid |
| Appearance: | Crystalline powder |
| Color: | White |
| Odor: | Odorless |
| Molecular Formula: | NaBO ₃ • H ₂ O |
| Molecular Weight: | 99.81 |
| pH: | 10 (1.5% w/v aqueous at 25 °C) |
| Specific Gravity: | No information found |
| Freezing/Melting Point: | Thermal decomposition at 60 °C (140 °F) |
| Boiling Point: | No information found |
| Flash Point: | No information found |
| Auto Ignition Temperature: | No information found |
| Flammable Limits in Air (% by Volume): | No information found |
| Solubility: | 15 g/L at 20°C |
| Vapor Pressure: | No information found |
| Vapor Density: | No information found |
| Percent Volatile: | No information found |
| Odor threshold (ppm): | No information found |
| Evaporation Rate: | No information found |
| Partition Coefficient (n-octanol/water): | No information found |

10. STABILITY AND REACTIVITY

| | |
|--|---|
| Stability: | Stable under normal conditions. |
| Conditions to Avoid: | Incompatibles, combustibles, excessive heat, moisture (hygroscopic) |
| Incompatible Materials: | Combustible materials, reducing agents, organic materials, heavy metal salts |
| Hazardous Decomposition Products: | Borane, boron oxides, sodium oxides |
| Possibility of Hazardous Reactions: | May react violently with the incompatible materials listed above. May yield hazardous decomposition products if exposed to excessive heat or temperature. |
| Hazardous Polymerization: | Will not occur. |

11. TOXICOLOGICAL INFORMATION

| | |
|------------------------------------|---|
| Toxicological Data: | Oral Mouse LD50: 1060 mg/kg |
| Acute Effects: | Harmful if swallowed, inhaled, or absorbed through skin. |
| Local Effects: | Toxic if swallowed. Causes irritation to eyes, skin, and respiratory tract. |
| Sensitization: | No information found |
| Chronic Effects: | No information found |
| Carcinogenic Effects: | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. |
| Skin Corrosion/Irritation: | No information found |
| Epidemiology: | No epidemiological data is available for this product. |
| Mutagenicity: | No information found |
| Neurological Effects: | No information found |
| Reproductive Effects: | May cause adverse reproductive effects. |
| Teratogenic Effects: | No information found |
| Target Organs and Symptoms: | Skin, eyes, mucus membranes, lungs, gastrointestinal tract. Irritation. |

12. ECOLOGICAL INFORMATION

| | |
|---------------------------------------|--|
| Ecotoxicological Data: | No information found |
| Ecotoxicity: | No information found |
| Environmental Effects: | Toxic to the environment. |
| Persistence and Degradability: | Long term biodegradation may occur. Products of biodegradation are as toxic as the product itself. |

Partition Coefficient (n-octanol/water): No information found

13. DISPOSAL INFORMATION

Disposal Instructions: Dispose of this material and its container to hazardous or special waste collection point. All wastes must be handled in accordance with local, state and federal regulations.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

Waste Codes: No information found

14. TRANSPORT INFORMATION

DOT:

UN Number: UN3377

Proper Shipping Name: Sodium Perborate, Monohydrate

Hazard Class: 5.1

Packaging Group: III

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: Sodium Perborate, Monohydrate

U.S. EPCRA (SARA Title III):

| Sections 311/312: | <u>Hazard Categories</u> | <u>List (Yes/No)</u> |
|--------------------------|----------------------------------|----------------------|
| | Section 311 – Hazardous Chemical | Yes |
| | Immediate Hazard | Yes |
| | Delayed Hazard | Yes |
| | Fire Hazard | No |
| | Pressure Hazard | No |
| | Reactivity Hazard | Yes |

Section 313: No information found

CERCLA Reportable Quantities: No information found

| International Inventories: | <u>Country(s) or Region</u> | <u>Inventory Name</u> | <u>On Inventory (Yes/No)*</u> |
|-----------------------------------|-----------------------------|--|-------------------------------|
| | Australia | Australian Inventory of Chemical Substances (AICS) | No |
| | Canada | Domestic Substances List (DSL) | Yes |
| | Canada | Non-Domestic Substances List (NDSL) | No |
| | China | Inventory of Existing Chemical Substances in China (IECSC) | No |
| | Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| | Europe | European List of Notified Chemical Substances (ELINCS) | No |
| | Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| | Korea | Existing Chemicals List (ECL) | No |
| | New Zealand | New Zealand Inventory | No |
| | Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |

*A "Yes" indicates that the listed component(s) of this product comply with the inventory requirements administered by the governing country(s)

16. OTHER INFORMATION

Product Use: For manufacturing, industrial and laboratory use only; not for household use.

Disclaimer: Pioneer Forensics LLC provides the information in this Material Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this MSDS are obtained from the literature and do not constitute product specifications. Pioneer Forensics LLC makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This MSDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, Pioneer Forensics LLC assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

Issue Date: 09/10/2013

Reason for Revision: Not applicable