SAFETY DATA SHEET

Updated on 15/05/2025

1. Material Identification

Product Name : Sodium percarbonate
Catalog Number : io-406823
CAS Number : 15630-89-4
Identified uses : Laboratory chemicals, manufacture of chemical compounds
Company : Ionz

>> R&D Use only

2. Hazards Identification

GHS Classification:

Flammable liquid (category 2)
Acute toxicity, oral (Category 3)
Acute toxicity, dermal (Category 3)
Acute toxicity, inhalation (Category 3)
Specific target organ toxicity, single exposure (Category 1)

Note

>> Pictograms displayed are for 99.3% (1130 of 1138) of reports that indicate hazard statements. This chemical does not meet GHS hazard criteria for 0.7% (8 of 1138) of reports.

Pictogram(s)

GHS Hazard Statements

>> H272 (46.1%): May intensify fire; oxidizer [Danger Oxidizing liquids; Oxidizing solids]

>> H302 (97.4%): Harmful if swallowed [Warning Acute toxicity, oral]

>> H318 (94.6%): Causes serious eye damage [Danger Serious eye damage/eye irritation]

Precautionary Statement Codes

>> P210, P220, P264, P264+P265, P270, P280, P301+P317, P305+P354+P338, P317, P330, P370+P378, and P501

EPA Safer Chemical:

EPA labels products so that consumers can easily choose ones that are safer for people and the environment. When consumers see the Safer Choice label on a product, they can be confident that the ingredients have been through a rigorous EPA review. The label means that EPA scientists have evaluated every ingredient in the product to ensure it meets Safer Choice's stringent criteria. When people use Safer Choice products, they are protecting their families and the environment by making safer chemical choices.

EPA Safer Chemical

>> Chemical: Sodium percarbonate

>> Green circle - The chemical has been verified to be of low concern based on experimental and modeled data.

Health Hazards:

>> Excerpt from ERG Guide 140 [Oxidizers]:

>> Inhalation, ingestion or contact (skin, eyes) with vapors or substance may cause severe injury, burns or death. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause environmental contamination. (ERG, 2024)

ERG 2024, Guide 140 (Sodium carbonate peroxyhydrate)

>> Inhalation, ingestion or contact (skin, eyes) with vapors or substance may cause severe injury, burns or death.

>> Fire may produce irritating, corrosive and/or toxic gases.

>> Runoff from fire control or dilution water may cause environmental contamination.

>> Excerpt from ERG Guide 140 [Oxidizers]:

>> CAUTION: Ammonium nitrate products may explode if involved in fire or contaminated with hydrocarbons (fuels), organic matter, other contaminants or when hot molten and contained. Treat as an explosive (ERG Guide 112). These substances will accelerate burning when involved in a fire. Some may decompose explosively when heated or involved in a fire. May explode from heat or contamination. Some will react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, oil, clothing, etc.). Containers may explode when heated. Runoff may create fire or explosion hazard. (ERG, 2024)

ERG 2024, Guide 140 (Sodium carbonate peroxyhydrate)

>> CAUTION: Ammonium nitrate products may explode if involved in fire or contaminated with hydrocarbons (fuels), organic matter, other contaminants or when hot molten and contained. Treat as an explosive (GUIDE 112).

>> These substances will accelerate burning when involved in a fire.

>> Some may decompose explosively when heated or involved in a fire.

>> May explode from heat or contamination.

>> Some will react explosively with hydrocarbons (fuels).

>> May ignite combustibles (wood, paper, oil, clothing, etc.).

>> Containers may explode when heated.

>> Runoff may create fire or explosion hazard.

>> Not combustible but enhances combustion of other substances. Risk of fire and explosion. See Chemical Dangers.

3. Composition/Information On Ingredients

Chemical name : Sodium percarbonate
CAS Number : 15630-89-4
Molecular Formula : C2H6Na4O12
Molecular Weight : 314.0200 g/mol

4. First Aid Measures

First Aid:

>> Excerpt from ERG Guide 140 [Oxidizers]:

>> Refer to the "General First Aid" section. Specific First Aid: Contaminated clothing may be a fire risk when dry. (ERG, 2024)

ERG 2024, Guide 140 (Sodium carbonate peroxyhydrate)

>> General First Aid:

>> Call 911 or emergency medical service.

>> Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and avoid contamination.

>> Move victim to fresh air if it can be done safely.

>> Administer oxygen if breathing is difficult.

>> If victim is not breathing:

>> DO NOT perform mouth-to-mouth resuscitation; the victim may have ingestedor inhaled the substance.

>> If equipped and pulse detected, wash face and mouth, then give artificial respiration using a proper respiratory medical device (bag-valve mask, pocket mask equipped with a one-way valve or other device).

>> If no pulse detected or no respiratory medical device available, provide continuouscompressions. Conduct a pulse check every two minutes or monitor for any signs of spontaneous respirations.

>> Remove and isolate contaminated clothing and shoes.

>> For minor skin contact, avoid spreading material on unaffected skin.

>> In case of contact with substance, remove immediately by flushing skin or eyes with running water for at least 20 minutes.

>> For severe burns, immediate medical attention is required.

>> Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.

>> Keep victim calm and warm.

>> Keep victim under observation.

>> For further assistance, contact your local Poison Control Center.

>> Note: Basic Life Support (BLS) and Advanced Life Support (ALS) should be done by trained professionals.

>> Specific First Aid:

>> Contaminated clothing may be a fire risk when dry.

>> In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping paper and/or the "ERAP" section.

First Aid Measures

Inhalation First Aid

>> Fresh air, rest.

Skin First Aid

>> Rinse skin with plenty of water or shower.

Eye First Aid

>> Rinse with plenty of water (remove contact lenses if easily possible). Refer for medical attention.

Ingestion First Aid

>> Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

5. Fire Fighting Measures

>> Excerpt from ERG Guide 140 [Oxidizers]:

>> SMALL FIRE: Use water. Do not use dry chemicals or foams. CO2 or HalonÂ® may provide limited control.

>> LARGE FIRE: Flood fire area with water from a distance. Do not move cargo or vehicle if cargo has been exposed to heat. If it can be done safely, move undamaged containers away from the area around the fire.

>> FIRE INVOLVING TANKS, RAIL TANK CARS OR HIGHWAY TANKS: For ammonium nitrate products: Do not fight cargo fire. Withdraw, evacuate and isolate area for at least 1600 meters (1 mile). Treat as an explosive (ERG Guide 112). Do not enter area for 24 hours or until expert advice has been provided. Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. ALWAYS stay away from tanks in direct contact with flames. For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn. (ERG, 2024)

>> In case of fire in the surroundings: water in large amounts, water spray. In case of fire: keep drums, etc., cool by spraying with water. NO direct contact of the substance with water.

6. Accidental Release Measures

Isolation and Evacuation:

Isolation and evacuation measures to take when a large amount of this chemical is accidentally released in an emergency.

>> Excerpt from ERG Guide 140 [Oxidizers]:

>> IMMEDIATE PRECAUTIONARY MEASURE: Isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.

>> LARGE SPILL: Consider initial downwind evacuation for at least 100 meters (330 feet).

>> FIRE: If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. If ammonium nitrate products are in a tank, rail car or truck and involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, initiate evacuation including emergency responders for 1600 meters (1 mile) in all directions. (ERG, 2024)

Evacuation: ERG 2024, Guide 140 (Sodium carbonate peroxyhydrate)

>> Immediate precautionary measure

>> Isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.

>> Large Spill

>> Consider initial downwind evacuation for at least 100 meters (330 feet).

>> Fire

>> If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

>> If ammonium nitrate products are in a tank, rail car or truck and involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, initiate evacuation including emergency responders for 1600 meters (1 mile) in all directions.

Spillage Disposal:

Methods for containment and safety measures to protect workers dealing with a spillage of this chemical.

>> Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered dry, plastic containers. Then store and dispose of according to local regulations.

Accidental Release Measures

Public Safety: ERG 2024, Guide 140 (Sodium carbonate peroxyhydrate)

>> CALL 911. Then call emergency response telephone number on shipping paper. If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.

>> Keep unauthorized personnel away.

>> Stay upwind, uphill and/or upstream.

>> Ventilate closed spaces before entering, but only if properly trained and equipped.

Spill or Leak: ERG 2024, Guide 140 (Sodium carbonate peroxyhydrate)

>> Keep combustibles (wood, paper, oil, etc.) away from spilled material.

>> Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

>> Stop leak if you can do it without risk.

>> Do not get water inside containers.

>> Small Dry Spill

>> With clean shovel, place material into clean, dry container and cover loosely; move containers from spill area.

>> Small Liquid Spill

>> Use a non-combustible material like vermiculite or sand to soak up the product and place into a container for later disposal.

>> Large Spill

>> Dike far ahead of liquid spill for later disposal.

7. Handling And Storage

Safe Storage:

>> Separated from : see Chemical Dangers. Cool. Store in an area without drain or sewer access.

Storage Conditions:

>> Keep container tightly closed in a dry and well-ventilated place.

8. Exposure Control/ Personal Protection

Emergency Response: ERG 2024, Guide 140 (Sodium carbonate peroxyhydrate)

>> Small Fire

>> Use water. Do not use dry chemicals or foams. CO2 or Halon® may provide limited control.

>> Large Fire

>> Flood fire area with water from a distance.

>> Do not move cargo or vehicle if cargo has been exposed to heat.

>> If it can be done safely, move undamaged containers away from the area around the fire.

>> Fire Involving Tanks, Rail Tank Cars or Highway Tanks

>> For ammonium nitrate products: Do not fight cargo fire. Withdraw, evacuate and isolate area for at least 1600 meters (1 mile). Treat as an explosive (GUIDE 112). Do not enter area for 24 hours or until expert advice has been provided.

>> Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.

>> Cool containers with flooding quantities of water until well after fire is out.

>> ALWAYS stay away from tanks in direct contact with flames.

>> For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Inhalation Risk:

>> A harmful concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

Effects of Short Term Exposure:

>> The substance is severely irritating to the eyes. The substance is irritating to the respiratory tract. The substance is mildly irritating to the skin.

Effects of Long Term Exposure:

>> Lungs may be affected by repeated or prolongated exposure. Repeated or prolonged contact with skin may cause dermatitis.

Fire Prevention

>> NO contact with combustible substances.

Exposure Prevention

>> PREVENT DISPERSION OF DUST!

Inhalation Prevention

>> Use local exhaust or breathing protection.

Skin Prevention

>> Protective gloves.

Eye Prevention

>> Wear safety goggles or eye protection in combination with breathing protection.

Ingestion Prevention

>> Do not eat, drink, or smoke during work. Wash hands before eating.

Exposure Control and Personal Protection

Protective Clothing: ERG 2024, Guide 140 (Sodium carbonate peroxyhydrate)

>> Wear positive pressure self-contained breathing apparatus (SCBA).

>> Wear chemical protective clothing that is specifically recommended by the manufacturer when there is NO RISK OF FIRE.

>> Structural firefighters' protective clothing provides thermal protection but only limited chemical protection.

9. Physical And Chemical Properties

Molecular Weight:

>> 314.02

Exact Mass:

>> 313.94500275

Physical Description:

>> Sodium percarbonate appears as a colorless, crystalline solid. Denser than water. May combust in contact with organic materials. Contact may irritate skin, eyes and mucous membranes. May be toxic by ingestion. Used to make other chemicals.

>> WHITE CRYSTALLINE POWDER.

Color/Form:

>> White granular powder

Melting Point:

>> No melting point; decomposes at >50 °C

Solubility:

>> Solubility in water, g/100ml at 20 °C: 14 (good)

Density:

>> 2.1 g/cm³

Vapor Pressure:

>> Vapor pressure, Pa at 25 °C: (negligible)

Stability/Shelf Life:

>> Stable under recommended storage conditions.

Decomposition:

>> When heated to decomposition it emits acrid smoke and irritating vapors.

10. Stability And Reactivity

>> Soluble in water.

CSL No

>> CSL00003

Reactants/Reagents

>> ACETONE + sodium percarbonate

Warning Message

>> can form explosive acetone peroxide compounds

GHS Category

>> Explosive

Reaction Scale

>> S (up to 1g)

Reaction Class

>> oxidation

Reference Source

>> User-Reported

Modified Date

>> 2/27/18

Create Date

>> 10/2/17

11. Toxicological Information

Exposure Routes:

>> The substance can be absorbed into the body by ingestion.

Inhalation Exposure

>> Cough. Sore throat.

Skin Exposure

>> Redness.

Eye Exposure

>> Redness. Pain. Blurred vision.

Ingestion Exposure

>> Sore throat. Burning sensation. Abdominal pain.

Antidote and Emergency Treatment:

>> Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. /Oxidizers/

Human Toxicity Excerpts:

>> /HUMAN EXPOSURE STUDIES/ A human patch (skin irritation) test with sodium percarbonate was performed using 26 human volunteers and exposing them for 15, 30 or 60 minutes through to 2, 3 and 4 hours. Only one out of 26 volunteers (4%) was considered to have demonstrated a "positive" irritant reaction.

Non-Human Toxicity Excerpts:

>> /LABORATORY ANIMALS: Acute Exposure/ A skin irritation study was conducted with 6 New Zealand White rabbits ... .. Sodium percarbonate (0.5 g) was moistened with physiological saline (0.9 %) and the rabbits were exposed for 4 hours under semi-occluded conditions. The scoring system for erythema and edema was done according to the Draize method (highest score of 4) and examinations were made at 0.5, 24, 48, 72 and 96 hours and days 7 and 14 after patch removal. Sodium percarbonate resulted in slight to moderate erythema and edema reactions. The highest erythema and edema score was 2 and this score was observed up to 7 days after patch removal. No reaction was discernible anymore after 14 days.

Non-Human Toxicity Values:

>> LC50 Rat inhalation >4.58 mg/L/1 hour

12. Ecological Information

ICSC Environmental Data:

>> The substance is toxic to aquatic organisms. It is strongly advised not to let the chemical enter into the environment.

13. Disposal Considerations

Spillage Disposal

>> Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered dry, plastic containers. Then store and dispose of according to local regulations.

Disposal Methods

>> SRP: The most favorable course of action is to use an alternative chemical product with less inherent propensity for occupational harm/injury/toxicity or environmental contamination. Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in soil or water; effects on animal and plant life; and conformance with environmental and public health regulations.

>> Product: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contaminated packaging: Dispose of as unused product.

14. Transport Information

DOT

Sodium percarbonate
5.1
UN Pack Group: III

IATA

Sodium percarbonate
5.1,
UN Pack Group: III

15. Regulatory Information

Regulatory Information

The Australian Inventory of Industrial Chemicals

>> Chemical: Carbonic acid sodium salt (1:2), compd. with hydrogen peroxide (H2O2) (2:3)

REACH Registered Substance

>> Status: Active Update: 15-07-2022 https://echa.europa.eu/registration-dossier/-/registered-dossier/15960

>> Status: Cease Manufacture Update: 23-05-2018 https://echa.europa.eu/registration-dossier/-/registered-dossier/25062

16. Other Information

Toxic Combustion Products:

Toxic products (e.g., gases and vapors) produced from the combustion of this chemical.

>> Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sodium oxides.

Other Safety Information

Chemical Assessment

>> IMAP assessments - Carbonic acid, disodium salt, compound with hydrogen peroxide (H2O2) (2:3): Environment tier I assessment

>> IMAP assessments - Carbonic acid, disodium salt, compound with hydrogen peroxide (H2O2) (2:3): Human health tier II assessment

"The information provided is believed to be accurate but is not comprehensive and should be used as a reference. It reflects our current knowledge and is intended for safety guidance related to the product. This document does not constitute a warranty of

the product's properties. Lonz is not responsible for any damages resulting from handling or contact with the product incorrectly."