



MATERIAL SAFETY DATA SHEET

Product Name: Ram Clearox

4949 Greenhouse Road Houston, TX 77084-2205 281/856-7600 - 800/456-3459 - Fax 281/856-7015

Product: Potassium Monopersulfate

Chemical Family:

Formula:

CAS Number: 70693-62-8

EEC-no: 274-778-7

Synonyms: No Chlor

24 HR EMERGENCY TELEPHONE NUMBER

INFOTRAC (Transportation): (800)535-5053

II – COMPOSITION, INFORMATION ON INGREDIENTS

Components	CAS Number	%
Potassium Peroxymonosulfate	10058-23-8	43
Potassium Bisulfate	7646-93-7	23
Potassium Sulfate	7778-80-5	29
Potassium Peroxydisulfate	7727-21-1	3
Magnesium Carbonate	546-93-0	2

III – HAZARDS IDENTIFICATION

Specials Hazards (concerning man and environment):

Contact with combustible material may cause fire. Harmful if swallowed, causes burns.

Primary Route(s) of Entry:

Ingestion:

Inhalation:

Skin Contact:

Eye Contact:

Primary Health Hazards (Acute and Chronic):

Carcinogenity Listings:

OSHA:

NTP:

IARC:

Signs & Symptoms of Exposure:

Ingestion:

Inhalation:

Skin Contact:
Eye Contact:
Medical Conditions Aggravated By Exposure:

IV – FIRST AID MEASURES

Emergency and First Aid Procedures:

Ingestion: Rinse mouth thoroughly with water and then drink copious amounts of water. Do Not Induce Vomiting. Seek medical advice immediately.

Inhalation: Bring victim to fresh air. Observe self –protection. Seek medical advice.

Skin Contact: Immediately remove all contaminated clothing. Wash skin with soap and water. Seek medical advice.

Eye Contact: Rinse immediately with plenty of water. Ensure adequate flushing of the eyes by separating eyelids with fingers. Seek medical advice.

V - FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A

Flammable Limits:

LEL:

UEL:

Ignition Temperature: No data available

Extinguishing Media: Water, water mist. Do not use water jet.

Special Fire-fighting Procedures: In case of fire and decomposition, formation of inflammable, irritant, corrosive, harmful/toxic gases and vapors possible. Do not breath fire gases. Wear self-contained breathing apparatus and fully protective clothing. Fight the blaze from a safe distance.

Unusual Fire and Explosion Hazards:

VI – ACCIDENTAL RELEASE MEASURES

Steps to Be Taken In Case Material Is Spilled or Released:

Take/pick up cautiously (e.g. with a clean PE-Shovel). Avoid dust formation.

Flush away small residues with plenty of water.

Avoid contact with the product. Wear personal protective equipment. Ensure good ventilation and exhaust ventilation. Avoid dust formation. Do not breathe dust.

Use suitable respiratory protection.

Keep away from sources of ignition – No smoking

Keep away from combustible and incompatible materials. Never add other substances or other waste to product residues. Bring residues to a safe place and eliminate immediately in accordance with locally valid waste disposal regulations.

Avoid release to the environment. Product must not be disposed off into sewage system!

VII – HANDLING AND STORAGE

Precautions to Be Taken in Handling and Storage:

The product should be stored in the closed supply container at temperatures below 30°C. The product is hygroscopic. Keep in a dry and well-ventilated place. Keep separated from other dangerous and incompatible substances.

Keep away from ignition and heat sources (e.g. direct sun light). Keep away from moisture! Avoid contamination (with e.g. rust, dust, ash), danger of decomposition! Keep away from combustible materials.

Avoid contact with skin, eyes and clothing, Wear personal protective equipment. Avoid dust formation. Use with adequate ventilations. Suction off product dusts at their point of generation. Do not breathe dust. Use suitable respiratory protection. At the end of work and before breaks, hands should be washed. Prophylactic skin protection recommended.

Product residues must not be returned into the original container, danger of decomposition!

Other Precautions:

Protect against Fire and explosions: The product itself is not combustible, but it may ignite combustible materials. It has oxidizing properties (by release of oxygen), especially in the presence of heat or moisture.

There is no data available about the formation of ignitable/explosive dust-air-mixtures. Keep away from sources of ignition – No Smoking. Take precautionary measure against static discharges.

VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Wear suitable respiratory protection (if necessary)

Ventilation: Use with adequate ventilation.

Local Exhaust:

Mechanical Exhaust:

Other Protective Clothing or Equipment: Wear suitable protective clothing, gloves, eye/face protection.

Work/ Hygienic Practices: Do not eat drink or smoke while handling the product.

IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: @ 760 mm Hg Decomposes

Vapor Pressure (mm Hg): No data available

Vapor Density (Air=1): Not volatile

Solubility: Soluble in water, approx. 250g/l @ 20°C

Appearance and odor: Solid, crystalline, free flowing salt. White, Odorless.

Specific Gravity (H₂O=1): 1.1-1.4

Percent volatile by volume:
Melting Point: Decomposes
Evaporation Rate:
Explosion Limits: No data available
Density (bulk density): approx. 1100 g/l
pH: approx. 2.3 (1 wt-% solution)
Partition coefficient (log Pow): No data available

X – STABILITY AND REACTIVITY

Stability: Unstable Stable
Conditions to Avoid: Keep away from heat and ignition sources. At or above 80°C self-acceleration decomposition is possible. Avoid moisture and contaminants. Even small amounts of moisture or contaminants may lower considerably the self-accelerating decomposition temperature (SADT)
Incompatibility: Acids, bases, alkalis, metal-ions/-salts, reducing agents, contaminants (e.g. rust, dust, ash), combustible materials.
Hazardous Decomposition or By-Products: In case of fire and decomposition, formation of inflammable, irritant, corrosive, harmful/toxic gases and vapors.
Hazardous Polymerization: May Occur Will Not Occur
Conditions to Avoid:
Thermal Decomposition: Decomposition (of the product as supplied) at temperatures \geq 60°C.
SADT (UN-Test h.4): > 80°C.

XI - TOXICOLOGICAL INFORMATION

Acute Toxicity:
LD50 (oral, rat, female): 1287 mg/kg.
LD50 (oral, rat, male): 1129 mg/kg.
Harmful if swallowed
LD50 (dermal, rabbit): > 11000 mg/kg.
LC50 (inhalation, rat): > 5mg/l/4h.

Target Organ Toxicity: Corrosive to skin, eyes and mucous membranes.
AMES_Test: Negative
Sensitization: Modifies Buehler-Test: Not sensitizing. Maximization-Test (Magnusson-Kligman, guinea pig): Not sensitizing. Maximization test (OECD 406, guinea pig): Not sensitizing.
Experiences with human exposure: After local contact irritation/burns of the gastro – intestinal tract. Hypersensitivity reactions are possible.
Reproductive and Development Toxicity:
Carcinogenicity:
Mutagenicity:

XII- ECOLOGICAL INFORMATION

Aquatic Toxicity:

Fish- Toxicity (B. rerio, OECD 203): LC50 (96h) = 32-56 mg/l.

Daphnia (Daphnia magna, OECD 202): EC50 (24h)=3.5 mg/l. NOEC (24h)=1.8 mg/l.

Avian Toxicity:

This product has to be classified as being dangerous to water. Avoid release to the environment. In case of spillage or leakage, appropriate measures have to be taken immediately.

ENVIRONMENTAL HAZARDS (PR Notice 93-10)

This product is toxic to fish and aquatic organisms. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water board or Regional Office of the EPA.

XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Eliminate in accordance with locally valid waste disposal regulations.

XIV - TRANSPORTATION DATA

U.S. Department of Transportation - 49 CFR

Proper Shipping Name: Corrosive solid, acidic, inorganic, n.o.s. contains:
Monopersulfate compound)

Hazard Class/Division Number: 8

ID Number: UN 3260

Packing Group: II

Label Required:

Placard Required:

Marine Pollutant:

International Maritime Organization - IMDG

Proper Shipping Name: Corrosive solid, acidic, inorganic, n.o.s. (contains:
Monopersulfate compound)

Hazard Class/Division Number: 8

ID Number: UN 3260

Packing Group: II

Label Required:

Placard Required:

Marine Pollutant:

EmS: 8-15

XV - REGULATORY INFORMATION

SARA Title III:

TSCA: Reported/Included

Germany: water pollution class (WGK): 1 (self classification)

Labeling according to EEC directives:

O= Oxidizing C= Corrosive

R-phrase (s):

R8 Contact with combustible material may cause fire.

R22 Harmful if swallowed

R34 Causes burns

S-phrase (s):

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves, and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

XVI - ADDITIONAL INFORMATION

This MSDS replaces the 07/18/2005 version. Any changes in information are as follows: Updated Components list; Physical Characteristics; Ecological Information; Proper Shipping Name and Regulatory Information.

ALWAYS COMPLY WITH ALL APPLICABLE INTERNATIONAL, FEDERAL, STATE AND LOCAL REGULATIONS REGARDING THE TRANSPORTATION, STORAGE, USE AND DISPOSAL OF THIS CHEMICAL.

Due to the changing nature of regulatory requirements, the REGULATORY INFORMATION listed in Section XV of this document should NOT be considered all-

inclusive or authoritative. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

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